

# MUNDELL & ASSOCIATES, INC.

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110 S Downey Avenue Indianapolis, Indiana 46219

Phone: 317-630-9060, Fax: 317-630-9065, email: [info@MundellAssociates.com](mailto:info@MundellAssociates.com)

October 22, 2009

Ms. Erin Brittain  
Project Manager  
Voluntary Remediation Program  
Office of Land Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204

Re: **Quarterly Monitoring Progress Report – 4<sup>th</sup> Quarter 2008**  
**Michigan Plaza**  
3801-3823 West Michigan Street  
Indianapolis, Indiana 46222  
IDEM Incident # 0000198  
IDEM VRP # 6061202  
MUNDELL Project No. M01046

Dear Ms. Brittain:

This *Quarterly Monitoring Progress Report* is being submitted to the Indiana Department of Environmental Management (IDEM) by MUNDELL & ASSOCIATES, INC. (MUNDELL), on behalf of AIMCO, to summarize further site characterization, remediation activities and quarterly monitoring performed from October 1 through December 31, 2008.

## **IDE� MEETING - OCTOBER 29<sup>th</sup>, 2008**

Mr. Stephen Evanoff, Mr. John Mundell, and Ms. Leena Lothe met with Ms. Erin Brittain, Mr. Bill Holland, Ms. Sarah Johansen, and Ms. Kristie McKinney of IDEM on October 29<sup>th</sup>, 2008. The following briefly summarizes the meeting highlights:

### ***Project Activities Progress Since Previous May 2007 IDEM Meeting***

- 1) CAP-18 treatment design & injection (August 2007).
- 2) Remediation Work Plan (RWP) submittal to IDEM (February 2008).
- 3) Installation of vapor intrusion mitigation systems at Michigan Apartments (May 2008).
- 4) Performance of additional indoor air testing at Michigan Plaza and Michigan Apartments (June 2008).
- 5) Performance of additional site characterization south of Michigan Plaza (August 2008).

- 6) Reply to IDEM response comments to RWP (September 2008).
- 7) Quarterly sampling of groundwater monitoring wells.

### **Topics Discussed**

- 1) Target levels for remediation were discussed, and “background levels” defined as concentration of contaminants from Genuine source in the deeper aquifer.
- 2) An approach for differentiating between Aimco and Genuine contamination.
- 3) Need for additional treatment (CAP-18 injection second round and other options).
- 4) Long-term vapor intrusion mitigation.
- 5) Additional site characterization under Michigan Plaza building where dry cleaning equipment was located.
- 6) Additional characterization of contaminants on Michigan Apartments emanating from sewer line.
- 7) Characterization of groundwater impacts to the south of Michigan Plaza.

### **Following Next Steps Discussed**

- 2) MUNDELL will resubmit a slightly revised RWP (*submitted RWP Addendum I to IDEM on November 6, 2008*).
- 3) MUNDELL will inject additional CAP-18 in the area north of Michigan Street, west of Apt Building 1 as discussed with IDEM (**Figure 1**).
- 4) MUNDELL will install additional deep monitoring wells (**Figure 1**) north of the area being treated in the south-southeast portion of Michigan Apartments, as discussed with IDEM, and will regroup with IDEM after 3 to 4 quarters of sampling. This work will enable demarcation between contaminants emanating from the Genuine site and contaminants from Michigan Plaza.
- 5) MUNDELL will conduct additional characterization of soil and groundwater beneath location of the former dry cleaning equipment and will regroup with AIMCO and IDEM to discuss additional treatment, if necessary.
- 6) MUNDELL will conduct additional indoor air quality testing in January-February 2009 at Michigan Apartments and Michigan Plaza.
- 7) IDEM agreed to reduce the chemical tested in groundwater and soil samples as typically seen at the site.

In general, IDEM was in agreement with the proposed investigation and remediation approach.

## GROUNDWATER MONITORING NETWORK SAMPLING

On November 18<sup>th</sup>, 2008, quarterly groundwater sampling of the existing twenty (20) monitoring wells established with IDEM on May 25, 2007, and the two (2) additional monitoring wells on the Floral Park Cemetery property was performed. The following constitute this quarterly groundwater monitoring network:

- 1        *Twenty (20) MUNDELL monitoring wells: MMW-1S, MMW-8S, MMW-9S, MMW-10S, MMW-P-01, MMW-P-02, MMW-P-03S, MMW-P-03D, MMW-P-04, MMW-P-05, MMW-P-06, MMW-P-07, MMW-P-08, MMW-P-09S, MMW-P-09D, MMW-P-10S, MMW-P-10D, MMW-11S, and MMW-C-01 and MMW-C-02 (MUNDELL wells on Floral Park Property)*
- 1)      *Two (2) Keramida monitoring wells: MW-168S and MW-168D.*

In addition to collection of groundwater levels from each of the above mentioned monitoring wells, MUNDELL measured static groundwater elevations via an electric oil/water interface probe from four nests of Keramida monitoring wells surrounding the Plaza Property for the purpose of more accurately determining the groundwater flow direction and gradient over this wider area. The following additional wells will have their groundwater levels measured each quarter:

- 1        *Eight (8) Keramida monitoring wells: MW-167S, MW-167D, MW-169S, MW-169D, MW-170S, MW-170D, MW-171S and MW-171D.*

During this investigation, monitoring well MMW-P-04 was found to contain approximately 10-inches of oil (CAP-18) at the top of the water table. All monitoring well sampling, survey and construction data are provided in **Tables 1, 2 and 2a**, respectively, and the potentiometric map is illustrated in **Figure 2**.

The wells were sampled utilizing a ‘Sample Pro Portable MicroPurge Pump’ for uniform low flow purging and sample collection. This microPurge pump uses a quick-change, one-piece bladder design, and can be connected to a Troll 9500 multi-parameter meter with an inline flow cell. This flow cell logs geochemical parameters (temperature, pH, dissolved oxygen, conductivity, and oxidation reduction potential), which help remove a minimal but sufficient amount of water (indicated by stabilization of geochemical parameters) to sample the well. The troll helps assess the geochemical parameters as evidence of conditions naturally conducive to natural attenuation existing in the aquifer. The pump is decontaminated between wells and the bladders are disposed of after sampling each well.

All excess purge water was transported to 55-gallon drums located at the Site for proper disposal.

As agreed in the October 29<sup>th</sup>, 2008 meeting with IDEM, and detailed in the RWP Addendum November 2008, groundwater samples were submitted to Pace Analytical Laboratories for the shorter list of VOC analysis via U.S. EPA SW-846 Method 8260, along with appropriate

duplicate (DUP), matrix spike (MS) and matrix spike duplicate (MSD). Groundwater samples were transferred into three 40-milliliter glass sample vials containing the preservative hydrochloric acid (HCl). Groundwater sample vials were sealed in plastic bags and placed in a cooler containing ice and delivered to Pace Analytical Services, Inc. (Pace) in Indianapolis, Indiana using appropriate chain-of-custody protocol for laboratory tests. Pace laboratory certificates of analysis for the groundwater samples analyzed are presented in **Appendix A**.

Baseline groundwater geochemical parameters (pH, dissolved oxygen, oxidation-reduction potential, conductivity, and temperature) were measured with a low-flow cell and multi-parameter water quality probe in the post-injection period to evaluate whether aquifer conditions continue to be favorable for natural attenuation of the indicator compounds at the Site.

Additional aquifer chemical parameter testing has been performed in the past and will be scheduled based on observed response and development in each plume area going forward. Additional aquifer parameters including methane, ethene, and ethane is periodically analyzed to evaluate indicator compound breakdown and redox-sensitivity. In addition, volatile fatty acids (VFA) to evaluate substrate distribution and lifetime duration of the product will also be tested periodically. These samples will be collected in select monitoring wells representative of each plume to monitor the presence of residual CAP 18<sup>TM</sup> in the aquifer and to provide additional monitoring of aquifer conditions. Future monitoring of these constituents will be performed as needed to evaluate the natural attenuation process.

It should be noted that the complete monitoring well network (a total of 40 monitoring wells including other wells on the Michigan Meadows Apartments property and other selected Keramida wells) will be sampled annually, as discussed with IDEM.

All excess purge water was transported to 55-gallon drums located at the Site for proper disposal.

## UPGRADIENT MONITORING WELLS INSTALLATION

Per the IDEM letter dated May 4<sup>th</sup>, 2007, additional upgradient monitoring wells were installed by MUNDELL in November 2008. MUNDELL completed installation of two deep (MMW-13D (screened from 35 to 50 feet bgs) and MMW-14D (screened from 40 to 50 feet bgs) and two shallow monitoring wells (MMW-11S and MMW-12S) upgradient of *Source Areas B* and *C* (**Figure 1**). Per discussion with IDEM, MMW-11S (screened from 23 to 33 feet bgs) is essentially a deep well (as deep as the hard glacial *till would allow*), which would enable establishing a full vertical profile north of *Source Area B*. This former MMW-11S is renamed and will be referred to as MMW-11D in any future submittals. Data from these new upgradient deep (and shallow) wells will define the ‘shallow’ and ‘deep’ aquifer groundwater quality conditions, and help to evaluate the contribution of chemicals coming from the Genuine Site to the north.

Four (4) permanent monitoring wells (MMW-11S, MMW-12S, MMW-13D, and MMW-14D) were installed in November and December 2008 by Midway Services with a hollow-stem auger mounted on a Boart Longyear BK 51 drill rig.

All of the permanent monitoring wells were constructed of 2-inch diameter, flush joint, threaded Schedule 40 PVC materials. The monitoring wells were constructed using 0.010-inch machine-slotted PVC screens, which were set at or within 2 to 4 feet above the groundwater surface. A sand filter pack, consisting of No. 5 sand, was installed around the bottom of each screen to a height approximately 2 to 3 feet above the top of the screen. A 15 foot PVC screen was installed in the construction of monitoring well MMW-13D, and 10-foot screens were installed in the construction of MMW-11S, MMW-12S and MMW-14D. The monitoring wells were backfilled with bentonite to 1 foot bgs. The monitoring wells were finished with a flush-mounted, bolt-down steel manhole cover set in place with a concrete pad to provide protection and stability to the wells. Each monitoring well was fitted with a watertight well cap to prevent the infiltration of surface water. Well construction diagrams for the monitoring wells are provided in **Appendix C**.

All soil cuttings generated during the drilling of the permanent monitoring wells and groundwater pumped out of the wells during well development were placed in 55-gallon drums located at the Site for later disposal. In accordance with IDEM guidelines, the contents in each drum were then identified with a label describing them as non-hazardous materials.

The monitoring wells were developed on December 11th, 2008 by MIDWAY. A Geosquirt double barrel purge pump was used to pump out water until it ran clear. The well development water was stored in the 55 gallon drums on site, and was properly disposed of later along with the soil cuttings.

These upgradient monitoring wells will be incorporated in the quarterly monitoring network starting the first quarter 2009, and the data will be presented in future reports.

## **SOIL SAMPLING DURING WELL INSTALLATION**

Soil samples were collected from within a disposable vinyl tube located inside the tube soil sampler. Soil samples were collected continuously a few feet into the water table, and field screened by a MUNDELL staff scientist. Soils were classified into intervals using the Munsell Soil Color Chart and the Unified Soil Classification System (USCS) by examining color, grain size, silt and clay content and plasticity. Each sample was divided into 1.0-foot intervals and placed into plastic bags and sealed. Field screening of the soil samples included observations of moisture content, odor, staining and the detection of total volatile organic vapors (TOVs) using a photo-ionization detector (PID) calibrated to 100 parts per million (ppm) isobutylene. Soil boring logs are provided in **Appendix B**.

One (1) soil sample above the water table was collected at each of the monitoring well installation locations for analytical testing. The samples were placed in soil jars and shipped on ice to Pace Analytical Services, Inc. (Pace) in Indianapolis, Indiana using the appropriate chain-of-custody protocol for laboratory tests. The samples were tested for volatile organic chemicals (VOCs) via U.S. EPA SW-846 Method 8260. The soil analytical results are reported in **Table 3**. Pace laboratory certificates of analysis are presented in **Appendix A**.

All soil cuttings generated during the drilling of the permanent monitoring wells and groundwater pumped out of the wells during well development were placed in 55-gallon drums located at the Site for later disposal. In accordance with IDEM guidelines, the contents in each drum were then identified with a label describing them as non-hazardous materials.

### **Soil Analytical Results (Monitoring Well Installation)**

Soil analytical testing results are summarized in **Tables 3**. The soil analytical results for all the indicator compounds were below their respective detection limits in all the soil samples collected at all the four monitoring well installation locations.

### **GROUNDWATER ANALYTICAL RESULTS (QUARTERLY MONITORING)**

Groundwater analytical testing results are summarized in **Table 4** and presented on **Figure 4**. Two (2) out of the twenty-two (22) monitoring wells sampled this quarter (MMW-1S and MMW-P-10S) showed PCE concentrations exceeding the IDEM RISC Industrial Default Closure Level (IDEM RISC IDCL). Two (2) monitoring wells (MMW-P-02 and MMW-P-04) demonstrated PCE concentrations exceeding the IDEM RISC Residential Default Closure Level (IDEM RISC RDCL) but below the IDCL. The historical indicator compounds trends in groundwater are presented in **Figure 5**.

One (1) monitoring well (MMW-1S) showed TCE concentration exceeding the IDEM RISC IDCL, and two monitoring wells (MMW-P-03S and MMW-P-10S) exceeding the RDCL, but below the IDCL.

Five (5) monitoring wells (MMW-9S, MMW-P-01, MMW-P-08, MMW-P-10S, MMW-P-10D) showed cis-1,2-DCE concentrations exceeding the IDEM RISC IDCL. Ten (10) monitoring wells (MMW-1S, MMW-8S, MMW-10S, MMW-11S, MMW-P-02, MMW-P-03S, MMW-P-03D, MMW-P-04, MMW-P-05, and MMW-P-07) exhibited cis-1,2-DCE concentrations exceeding the RDCL, but below the IDCL.

Fifteen (15) monitoring wells (MMW-1S, MMW-8S, MMW-9S, MMW-10S, MMW-11S, MMW-P-01, MMW-P-02, MMW-P-03S, MMW-P-03D, MMW-P-06, MMW-P-07, MMW-P-08, MMW-P-09D, MMW-P-10S, MMW-P-10D) showed vinyl chloride concentrations exceeding the IDEM RISC IDCL.

### **IN-SITU BIOREMEDIATON PROGRESS**

Based upon the 1) the extent and severity of the indicator compound concentrations and trends, 2) site-specific operational constraints and uses, 3) geochemical and physical characteristics of the aquifer, and 4) economic factors, in-situ bioremediation with CAP18™ (an enhanced, food-grade vegetable oil product), followed by Monitored Natural Attenuation (MNA) is the selected remediation technology for the Site for treating groundwater, as detailed in the RWP. The initial CAP18™ injection was performed in all the three source areas in August 2007 using a direct push Geoprobe system. Locations and spacing of the injection points were designed to address the sewer line related *Chemical Source Areas* and provide injection locations in each *Chemical Source Area* that upon migration downgradient in the direction of groundwater flow, are expected to remediate the most significant groundwater impacts.

### **INDICATOR CHEMICAL TRENDS**

A group of monitoring wells from the sampling network is utilized to monitor dissolved indicator compound concentration trends over time at various locations within the heart of the three chemical source areas. Graphs of historical PCE, TCE, cis-1,2-DCE and vinyl chloride concentrations are developed for the following monitoring wells:

**Source Area A:** MMW-P-03D

**Source Area B:** MMW-P-01, MMW-P-07, MMW-P-08, and MMW-8S

**Source Area C:** MMW-1S, MMW-9S, and MMW-10S.

**Figures 5 and 6** illustrate the changes in the chlorinated solvents concentrations demonstrating reductive dechlorination as a result of the CAP-18 remediation implementation. To illustrate the effect of the CAP-18 injection on hydrocarbon concentrations, injection dates are included on the graphs.

PCE impacts in the *Source Area A* (MMW-P-03D) appear to have a decreasing trend, and the cis-1,2-DCE and vinyl chloride demonstrated an increasing trend after the CAP-18 injection in August 2007. This is indicative of reductive dechlorination (indicating breakdown of parent compounds via reductive dechlorination) in *Source Area A*.

PCE impacts in the *Source Area B* (MMW-P-01, MMW-P-07, MMW-P-08) have significantly decreased, with corresponding increases in the cis-1,2-DCE and vinyl chloride concentrations after the CAP-18 injection, clearly indicative of reductive dechlorination in *Source Area B*. There was a slight increase in the PCE concentration in monitoring well MMW-8S immediately after injection during the fourth quarter of 2007, followed by a decreasing trend in the first quarter of 2008, accompanied by a spike in cis-1,2-DCE and vinyl chloride concentrations. The PCE concentration has significantly decreased in monitoring well MW-8S since then, although it was slightly higher immediately after injection. The analytical results are attached in **Appendix A**.

Thus, an overall decreasing trend in PCE and TCE concentrations, and an increase in the daughter product concentrations (indicating breakdown of parent compounds via reductive

dechlorination) has occurred significantly since the CAP-18 injection in the *Source Areas A, B and C* in August 2007. The groundwater samples collected from monitoring wells downgradient of the injection/source areas have shown substantial decreases in PCE concentrations since the CAP-18 injection in August 2007.

A second round of CAP-18ME injection is deemed appropriate and would allow for PCE concentrations to be reduced more effectively in areas that still contain higher levels of chlorinated hydrocarbons. A booster injection has been proposed in *Source Area C* (west - southwest of Apartment Bldg No. 1, *Source Area B* (plaza parking lot), and *Source Area A* (beneath the plaza building during soil sampling activities) as illustrated in **Figure 1** to further remediate the plumes.

### **INDOOR AIR MITIGATION SYSTEMS PERFORMANCE**

Four sub-floor slab depressurization units were installed by *Air Quality Control (AQC)* under the oversight of MUNDELL in September 2006. Three additional sub-floor slab depressurization units were installed by AQC under the oversight of MUNDELL on March 19 and 26, 2008. Unit/blowers were installed in the following spaces at Michigan Plaza: 1) the Village Pantry (B1), 2) the former Handicap Space (B2), 3) the Mexican Store (B3), and 4) the Laundromat (B4). The systems installed at the Michigan Apartments are: Building No. 1, Basement Apartment 101 (B5), Building No. 6, Basement Apartment 602 (B6), and Building No. 10, Basement Apartment 1001 (B7). The system locations are illustrated in **Figure 7**.

Since the time of installation, system stack air samples were collected weekly for a few weeks followed by bi-weekly sampling for a month, monthly for a quarter and then on a quarterly basis thereafter. PID readings have also been concurrently measured in each of the stacks. The historical PCE concentration trends and cumulative pounds of PCE and total contaminants removed by each of the systems (B1 through B7) are summarized in **Figures 8 through 16**. The associated calculations are provided in **Appendix D**.

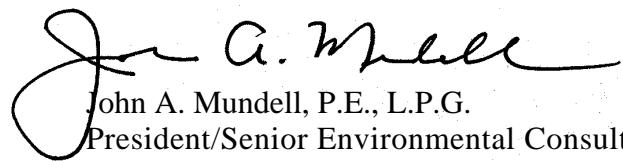
We appreciate the opportunity to update IDEM on the progress of remedial activities and monitoring at the Site. If you have any questions, please don't hesitate to contact us at (317) 630-9060 or via email ([jmundell@MundellAssociates.com](mailto:jmundell@MundellAssociates.com); [llothe@MundellAssociates.com](mailto:llothe@MundellAssociates.com)).

Sincerely,

**MUNDELL & ASSOCIATES, INC.**



Leena A. Lothe  
Project Environmental Engineer



John A. Mundell, P.E., L.P.G.  
President/Senior Environmental Consultant

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Attachments:   Tables  
                  Figures  
                  Appendices

cc:       Mr. Stephen Evanoff, AIMCO

## **TABLES**

- |          |  |
|----------|--|
| Table 1  | Tabulated Groundwater Level Measurements       |
| Table 2  | Monitoring Well Construction Summary           |
| Table 2a | Monitoring Well Construction Summary           |
| Table 3  | Soil Analytical Results                        |
| Table 4  | Monitoring Well Groundwater Analytical Results |
| Table 5  | Monitoring Well Cumulative Analytical Results  |

## **FIGURES**

- |           |  |
|-----------|--|
| Figure 1  | Proposed CAP-18 Injection and Soil Testing Locations       |
| Figure 2  | Potentiometric Surface Map                                 |
| Figure 3  | Further Soil Delineation                                   |
| Figure 4  | Groundwater Analytical Results (Fourth Quarter 2008)       |
| Figure 5  | Indicator Compound Trends in Groundwater                   |
| Figure 6  | Parent and Daughter Products Distribution in Groundwater   |
| Figure 7  | Vapor Mitigation System Locations                          |
| Figure 8  | PCE Concentration Trends & Cumulative Pounds Removed (B-1) |
| Figure 9  | PCE Concentration Trends & Cumulative Pounds Removed (B-2) |
| Figure 10 | PCE Concentration Trends & Cumulative Pounds Removed (B-3) |
| Figure 11 | PCE Concentration Trends & Cumulative Pounds Removed (B-4) |
| Figure 12 | PCE Concentration Trends & Cumulative Pounds Removed (B-5) |
| Figure 13 | PCE Concentration Trends & Cumulative Pounds Removed (B-6) |

- Figure 14 PCE Concentration Trends & Cumulative Pounds Removed (B-7)
- Figure 15 PCE Concentration Trends & Cumulative Pounds Removed (B-1 through B-4)
- Figure 16 PCE Concentration Trends & Cumulative Pounds Removed (B-5 through B-7)

## **APPENDICES**

Appendix A. Lab Analytical Results

Appendix B. Soil Boring Logs

Appendix C. Monitoring Well Construction Diagrams

Appendix D. Air Mitigation Systems: Pounds of Contaminants Removed

## **TABLES**

**Table 1**  
**Tabulated Water Level Measurements**  
**Fourth Quarter 2008**  
**Groundwater Level Date: November 19-20, 2008**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

Monitoring Well	Date of Water Level	Top of Casing Elevation (feet MSL)	Total Depth (feet)	Depth To Water (feet)	Groundwater Elevation (feet MSL)
<b>On-Site Monitoring Wells</b>					
MMW-P-01	11/19/2008	715.79	28	19.68	696.11
MMW-P-02	11/19/2008	716.70	30	20.91	695.79
MMW-P-03S	11/19/2008	716.55	28	20.73	695.82
MMW-P-03D	11/19/2008	716.45	35	20.61	695.84
MMW-P-04	11/19/2008	716.27	28	20.90	696.56*
MMW-P-05	11/19/2008	716.12	28	20.14	695.98
MMW-P-06	11/19/2008	716.50	28	20.57	695.93
MMW-P-07	11/19/2008	715.30	28	18.56	696.74
MMW-P-08	11/19/2008	715.22	28	18.42	696.80
MMW-P-10S	11/19/2008	714.59	28	18.12	696.47
MMW-P-10D	11/19/2008	714.98	38	18.67	696.31
<b>Off-Site Monitoring Well (Cemetery ROW)</b>					
MMW-P-09S	11/19/2008	715.36	28	20.44	694.92
MMW-P-09D	11/19/2008	715.21	45	20.25	694.96
<b>Off-Site Monitoring Wells (Keramida)</b>					
MW-168S	11/20/2008	714.79	22	18.29	696.50
MW-168D	11/20/2008	714.71	31	18.23	696.48
<b>Off-Site Monitoring Wells (Michigan Meadows Apartments)</b>					
MMW-1S	11/20/2008	713.66	20	16.38	697.28
MMW-8S	11/20/2008	714.75	24	17.28	697.47
MMW-9S	11/20/2008	714.09	25	17.43	696.66
MMW-10S	11/20/2008	713.23	25	16.53	696.7
MMW-11S	11/20/2008	713.69	33	16.36	697.33
<b>Off-Site Monitoring Well (Cemetery ROW)</b>					
MMW-C-01	11/20/2008	715.36	28	20.25	695.11
MMW-C-02	11/20/2008	715.21	45	19.60	695.61
<b>Off-Site Keramida Monitoring Wells</b>					
MW 171S	11/20/2008	711.83	37	16.05	695.78
MW 171D	11/20/2008	711.88	25	16.59	695.29
MW 169S	11/20/2008	715.95	49	20.89	695.06
MW 169D	11/20/2008	715.23	22	20.92	694.31
MW 170S	11/20/2008	717.4	27	21.62	695.78
MW 170D	11/20/2008	717.34	39	21.69	695.65
MW 167S	11/20/2008	716.25	22	19.92	696.33
MW 167D	11/20/2008	716.25	33	19.07	697.18
Notes: *10 inches of oil noted					

**Table 2**  
**Monitoring Well Construction Summary**  
**Fourth Quarter 2008**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

Monitoring Well	Date Installed	Date of Water Level	*Top of Casing Elevation (feet MSL)	Total Depth (feet)	Screened Interval (feet)			Depth To Water (feet)	Groundwater Elevation (feet MSL)
MMW-P-01	09/28/05	9/19/07	715.79	28.00	18.00	-	28.00	19.69	696.10
MMW-P-02	09/27/05	9/19/07	716.70	30.00	20.00	-	30.00	20.90	695.80
MMW-P-03S	09/26/05	9/19/07	716.55	28.00	18.00	-	28.00	20.79	695.76
MMW-P-03D	09/27/05	9/19/07	716.45	35.00	25.00	-	35.00	20.63	695.82
MMW-P-04	09/26/05	9/19/07	716.27	28.00	18.00	-	28.00	20.49	695.78
MMW-P-05	09/26/05	9/19/07	716.12	28.00	18.00	-	28.00	20.14	695.98
MMW-P-06	09/28/05	9/19/07	716.50	28.00	18.00	-	28.00	20.57	695.93
MMW-P-07	01/11/07	9/19/07	715.30	28.00	18.00	-	28.00	18.84	696.46
MMW-P-08	01/11/07	9/19/07	715.22	28.00	18.00	-	28.00	18.61	696.61
MMW-P-09S	01/29/07	9/19/07	715.36	28.00	18.00	-	28.00	20.17	695.19
MMW-P-09D	05/31/07	9/19/07	715.21	45.00	35.00	-	45.00	20.35	694.86
MMW-P-10S	06/01/07	9/19/07	714.59	28.00	18.00	-	28.00	18.30	696.29
MMW-P-10D	06/01/07	9/19/07	714.98	38.00	28.00	-	38.00	18.69	696.29

Note: The top of casing elevation for each well was determined assuming a surveyed top of casing elevation of 712.54 ft elevation given in the Keramida Phase II Investigation Report dated March 2002 for well MW-165S (located along Michigan Meadows Apartments northern property line) and a surveyed top of casing elevation of 711.88 ft for well MW-171D located east-southeast of Michigan Plaza on Olin Avenue.

**Table 2 Continued**  
**Monitoring Well Construction Summary**  
**Michigan Apartments**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

Monitoring Well	Date Installed	Date of Water Level	*Top of Casing Elevation (feet MSL)	Total Depth (feet)	Screened Interval (feet)		Depth To Water (feet)	Groundwater Elevation (feet MSL)
MMW-1S	8/20/04	9/19/07	713.66	20.00	10.00	-	20.00	16.36
MMW-8S	1/11/07	9/19/07	714.75	24.00	14.00	-	24.00	17.41
MMW-9S	1/12/07	9/19/07	714.09	25.00	15.00	-	25.00	17.45
MMW-10S	1/12/07	9/19/07	713.23	25.00	15.00	-	25.00	16.17
MMW-11D	5/31/07	9/19/07	713.69	33.00	23.00	-	33.00	16.43
MMW-11S	11/26/08	NM	713.64	24.00	14.00	-	24.00	NM
MMW-12S	11/26/08	NM	712.82	28.00	18.00	-	28.00	NM
MMW-13D	11/21/08	NM	713.53	50.00	35.00	-	50.00	NM
MMW-14D	12/10/08	NM	712.61	50.00	40.00	-	50.00	NM

Notes: The top of casing elevation for each well was determined assuming a surveyed top of casing elevation of 712.54 ft elevation given in the Keramida Phase II Investigation Report dated March 2002 for well MW-165S (located along Michigan Meadows Apartments northern property line) and a surveyed top of casing elevation of 711.88 ft for well MW-171D located east-southeast of Michigan Plaza on Olin Avenue.

NM: Not Measured

NA: Not Available

**Table 3**  
**Soil Analytical Results**  
**Monitoring Well Installation (Nov-Dec 2008)**  
**Fourth Quarter 2008**  
**Michigan Plaza**  
**1301-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Sample ID (Depth)	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		mg/kg					
MMW-11S (8-10')	11/21/2008	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057
MMW-12S (10-12')	11/24/2008	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055
MMW-13D (6-8')	11/21/2008	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
MMW-14D (6')	12/10/2008	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
IDEML RISC Default Industrial Cleanup Level	–	<b>0.64</b>	<b>0.082</b>	<b>6</b>	<b>14</b>	<b>1</b>	<b>0.013</b>
IDEML RISC Default Residential Cleanup Level	–	<b>0.058</b>	<b>0.057</b>	<b>0.4</b>	<b>0.68</b>	<b>0.47</b>	<b>0.013</b>

Note:

All Values Over IDEML RISC Industrial Default Cleanup Level shown in **RED**

All Values Over IDEML RISC Residential Default Cleanup Level shown in **BLUE**

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

**Table 4**  
**Monitoring Well Groundwater Analytical Results**  
**Fourth Quarter 2008**  
**Michigan Plaza**  
**38014-3823 W. Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l					
<b>Monitoring Wells (Apts)</b>							
MMW-1S	11/20/2008	223	45.5	169	<5.0	<5.0	14.5
MMW-8S	11/20/2008	<5.0	<5.0	123	<5.0	<5.0	584
MMW-9S	11/20/2008	<5.0	<5.0	5,820	90.2	<5.0	1,010
MMW-10S	11/20/2008	<5.0	<5.0	212	<5.0	<5.0	15.9
MMW-11S	11/20/2008	<5.0	<5.0	554	23.9	<5.0	18.5
<b>Monitoring Wells (Plaza)</b>							
MMW-P-01	11/19/2008	<5.0	<5.0	4,320	<5.0	<5.0	116
MMW-P-02	11/19/2008	10.7	<5.0	75.4	<5.0	<5.0	69.5
MMW-P-03S	11/19/2008	<5.0	6.00	494	<5.0	<5.0	40.8
MMW-P-03D	11/19/2008	<5.0	<5.0	80.6	<5.0	<5.0	36.9
MMW-P-04	11/19/2008	45	<5.0	248	<5.0	<5.0	<2.0
MMW-P-05	11/19/2008	<5.0	<5.0	22.1	<5.0	<5.0	<2.0
MMW-P-06	11/19/2008	<5.0	<5.0	292	<5.0	<5.0	61.4
MMW-P-07	11/19/2008	<5.0	<5.0	797	<5.0	<5.0	749
MMW-P-08	11/19/2008	<50.0	<50.0	5,690	91.4	<50.0	13,000
MMW-P-09S	11/19/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
MMW-P-09D	11/19/2008	<5.0	<5.0	<5.0	<5.0	<5.0	97.2
MMW-P-10S	11/19/2008	78.6	28	1,510	<5.0	<5.0	22.3
MMW-P-10D	11/19/2008	<5.0	<5.0	3,390	<5.0	<5.0	5,030
<b>Keramida Monitoring Wells (Off-site)</b>							
MW-168S	12/2/2008	102	18.8	79.5	<5.0	<5.0	6.2
MW-168D	NS	NS	NS	NS	NS	NS	NS
<b>Floral Park Monitoring Wells (Off-site)</b>							
MMW-C-01	11/20/2008	15.7	8.3	296	<5.0	<5.0	<2.0
MMW-C-02	11/20/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
IDE� RISC Default Industrial Cleanup Level	—	55	31	1,000	2,000	1,000	4
IDE� RISC Default Residential Cleanup Level	—	5	5	70	100	80	2

Note:

All Values Over IDE� RISC Default Industrial Cleanup Level in **RED**

All Values Over IDE� RISC Default Residential Cleanup Level in **BLUE**

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

**Table 5**  
**Monitoring Well Groundwater Analytical Results**  
**Fourth Quarter 2008**  
**Michigan Plaza**  
**3801-3823 W. Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
<b>Monitoring Wells (Apts)</b>							
MMW-1S	9/10/2004	3.1 J	< 5.0	< 5.0	< 5.0	<5.0	4.1
	3/15/2005	150	10	< 5.0	< 5.0	< 5.0	< 2.0
	11/9/2005	130	8.3	<5.0	<5.0	<5.0	8.9
	9/5/2006	200	13	<5.0	<5.0	<5.0	4.6
	2/22/2007	220	14.9	<5.0	<5.0	<5.0	<2.0
	6/14/2007	240	<5.0	<5.0	<5.0	<5.0	<2.0
	9/19/2007	362	10.5	<5.0	<5.0	31.6	<2.0
	12/13/2007	330	8.1	<5.0	<5.0	27	<2.0
	3/21/2008	280	14	<5.0	<5.0	<5.0	<2.0
	6/6/2008	277	13.2	<5.0	<5.0	<5.0	<2.0
	9/11/2008	288	14.7	<5.0	<5.0	<5.0	<2.0
	11/20/2008	223	45.5	169	<5.0	<5.0	14.5
MMW-2S	9/10/2004	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	11/9/2005	<5.0	<5.0	<5.0	<5.0	<5.0	5.2
	9/5/2006	<5.0	<5.0	<5.0	<5.0	<5.0	5.2
	6/2/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
MMW-3S	8/26/2004	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	9/10/2004	<5.0	5.2	<5.0	<5.0	<5.0	<2.0
	11/9/2005	<5.0	28	5.4	<5.0	<5.0	<2.0
	9/5/2006	<5.0	23	7.4	<5.0	<5.0	<2.0
	6/2/2008	<5.0	20.2	7.9	<5.0	<5.0	2.8
MMW-4D	8/25/2004	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	9/10/2004	<5.0	<5.0	980	<5.0	<5.0	200
	11/10/2005	<5.0	<5.0	850	<5.0	<5.0	240
	9/5/2006	<5.0	<5.0	1,100	2.3J	<5.0	220
	6/2/2008	<5.0	<5.0	515	<5.0	<5.0	32.2
MMW-5D	8/24/2004	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	9/10/2004	<5.0	<5.0	3400	13	<5.0	270
	11/10/2005	<5.0	<5.0	3900	19	<5.0	140
	9/5/2006	<50	<50	2500	<50	<5.0	170
	6/2/2008	<5.0	<5.0	1360	19.9	<5.0	207
MMW-6D	9/10/2004	<5.0	<5.0	540	<5.0	<5.0	400
	11/10/2005	<5.0	<5.0	750	<5.0	<5.0	700
	9/5/2006	<5.0	<5.0	300	<5.0	<5.0	440
	6/2/2008	<5.0	<5.0	65.5	<5.0	<5.0	242
MMW-7S	8/24/2004	<5.0	<5.0	28	<5.0	<5.0	<2.0
	9/10/2004	<5.0	<5.0	8.5	<5.0	<5.0	<2.0
	11/9/2005	<5.0	<5.0	9.5	<5.0	<5.0	<2.0
	9/5/2006	<5.0	<5.0	5.8	<5.0	<5.0	4.5
	6/2/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
IDEMLISC Default Industrial Cleanup Level - 2006	-	55	31	1,000	2,000	1,000	4
IDEMLISC Default Residential Cleanup Level - 2006	-	5	5	70	100	80	2

Note:

All Values Over IDEMLISC Default Industrial Cleanup Level in RED

All Values Over IDEMLISC Default Residential Cleanup Level in BLUE

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

Green Shading indicates areas that appear to be undergoing reductive dechlorination due to CAP-18 Injections

"J" designation indicates concentration was estimated due to high concentration of one parameter requiring dilution on other parameter quantitations

"-" indicates geochemical parameter was not collected, "NV" indicates data was not valid due to equipment error

**Table 5**  
**Monitoring Well Groundwater Analytical Results**  
**Fourth Quarter 2008**  
**Michigan Plaza**  
**3801-3823 W. Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
MMW-8S	2/22/2007	114	<5.0	289	13.8	<5.0	40.6
	6/14/2007	15.9	<5.0	364	9.5	<5.0	82.1
	9/19/2007	<5.0	<5.0	778	24.6	<5.0	145
	12/13/2007	7.7	<5.0	1,000	7.4	<5.0	586
	3/20/2008	<5.0	<5.0	470	<5.0	<5.0	330
	6/6/2008	<5.0	<5.0	336	<5.0	<5.0	509
	9/10/2008	<5.0	<5.0	275	<5.0	<5.0	322
	11/20/2008	<5.0	<5.0	123	<5.0	<5.0	584
MMW-9S	2/22/2007	782	88.6	78.9	<5.0	<5.0	<2.0
	6/14/2007	858	85.7	65.3	<5.0	<5.0	<2.0
	9/20/2007	1,430	112	70.3	8.2	<5.0	<2.0
	12/12/2007	37.9 J	17.9 J	1,700	29.8 J	<50.0	<20.0
	3/21/2008	57	20	2,900	39	<5.0	16
	6/6/2008	52.9	28	1,540	38.2	<5.0	295
	9/10/2008	52.6	22.7	4,920	94.5	<5.0	167
	11/20/2008	<5.0	<5.0	5,820	90.2	<5.0	1,010
MMW-10S	2/22/2007	49.6	<5.0	<5.0	<5.0	<5.0	<2.0
	6/14/2007	77.6	<5.0	<5.0	<5.0	<5.0	<2.0
	9/19/2007	66	<5.0	<5.0	<5.0	<5.0	<2.0
	12/12/2007	124	56	149	<5.0	<5.0	<2.0
	3/21/2008	440	12	8.1	<5.0	<5.0	12
	6/6/2008	541	62.1	218	<5.0	<5.0	30.4
	9/10/2008	6.9	<5.0	353	8.2	<5.0	<2.0
	11/20/2008	<5.0	<5.0	212	<5.0	<5.0	15.9
MMW-11S	6/14/2007	<5.0	<5.0	225	6.8	<5.0	18.6
	9/19/2007	<5.0	<5.0	442	21.1	<5.0	30.1
	12/13/2007	7.2	<5.0	920	27	<5.0	49
	3/20/2008	<5.0	<5.0	420	17	<5.0	4.9
	6/5/2008	<5.0	<5.0	623	23.1	<5.0	26.7
	9/10/2008	<5.0	<5.0	327	18.3	<5.0	9.9
	11/20/2008	<5.0	<5.0	554	23.9	<5.0	18.5
IDEML RISC Default Industrial Cleanup Level - 2006	-	55	31	1,000	2,000	1,000	4
IDEML RISC Default Residential Cleanup Level - 2006	-	5	5	70	100	80	2

Note:

All Values Over IDEML RISC Default Industrial Cleanup Level in RED

All Values Over IDEML RISC Default Residential Cleanup Level in BLUE

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**Table 5**  
**Monitoring Well Groundwater Analytical Results**  
**Fourth Quarter 2008**  
**Michigan Plaza**  
**3801-3823 W. Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
<b>Monitoring Wells (Plaza)</b>							
MMW-P-01	11/9/2005	33	210	160	9.6	<5.0	76
	2/22/2007	85.2	356	274	16.7	<5.0	28.7
	6/14/2007	111	368	350	10	<5.0	79.6
	9/20/2007	206	322	300	11.5	<5.0	127
	12/14/2007	230	320	240	7.1	<5.0	87
	3/21/2008	120	170	3,100	25	<5.0	42
	6/5/2008	22	31.5	3,660	68.6	<5.0	123
	9/11/2008	14.2	15.1	1,690	<5.0	<5.0	87.7
	11/19/2008	<5.0	<5.0	4,320	<5.0	<5.0	116
MMW-P-02	11/8/2005	24	<5.0	87	7.3	<5.0	49
	2/22/2007	184	<5.0	39.4	<5.0	<5.0	27.4
	6/14/2007	17.1	<5.0	35	<5.0	<5.0	27.5
	9/19/2007	13.3	<5.0	66.3	5.6	<5.0	50.1
	12/13/2007	7.8	<5.0	69	<5.0	<5.0	53
	3/20/2008	19	<5.0	67	<5.0	<5.0	42
	6/5/2008	94.9	<5.0	44	<5.0	<5.0	46.4
	9/11/2008	17.5	<5.0	46.6	<5.0	<5.0	42
	11/19/2008	10.7	<5.0	75.4	<5.0	<5.0	69.5
MMW-P-03S	11/9/2005	110	<5.0	97	9.6	<5.0	<2.0
	2/22/2007	397	<5.0	105	10	<5.0	<2.0
	6/14/2007	256	<5.0	96.4	9.2	<5.0	9.3
	9/20/2007	144	<5.0	131	15.8	<5.0	16
	12/13/2007	67	<5.0	88	5.3	<5.0	15
	3/20/2008	130	<5.0	84	7.3	<5.0	10
	6/5/2008	19.4	<5.0	380	14.9	<5.0	10.6
	9/11/2008	<5.0	<5.0	<5.0	<5.0	<5.0	72.6
	11/19/2008	<5.0	6	494	<5.0	<5.0	40.8
MMW-P-03D	11/9/2005	22	<5.0	42	<5.0	<5.0	2
	2/22/2007	48.9	<5.0	57.8	<5.0	39	15.6
	6/14/2007	21.7	<5.0	74.9	<5.0	<5.0	34.5
	9/19/2007	14.3	<5.0	76.1	7.3	<5.0	36.6
	12/13/2007	11	<5.0	40	<5.0	<5.0	20
	3/20/2008	<5.0	<5.0	170	6	<5.0	18
	6/5/2008	<5.0	<5.0	150	7.4	<5.0	26
	9/11/2008	<5.0	<5.0	95.7	6.4	<5.0	<2
	11/19/2008	<5.0	<5.0	80.6	<5.0	<5.0	36.9
MMW-P-04	11/9/2005	180	<5.0	<5.0	<5.0	<5.0	<2.0
	2/22/2007	315	<5.0	<5.0	<5.0	<5.0	<2.0
	6/14/2007	268	<5.0	<5.0	<5.0	<5.0	<2.0
	9/20/2007	214	<5.0	<5.0	<5.0	<5.0	<2.0
	12/13/2007	62	<5.0	<5.0	<5.0	<5.0	<2.0
	3/20/2008	120	<5.0	<5.0	<5.0	<5.0	<2.0
	6/6/2008	154	6	59.7	<5.0	<5.0	<2.0
	9/11/2008	31.9	<5.0	360	7.1	<5.0	<2.0
	11/19/2008	45	<5.0	248	<5.0	<5.0	<2.0
IDEML RISC Default Industrial Cleanup Level - 2006	-	55	31	1,000	2,000	1,000	4
IDEML RISC Default Residential Cleanup Level - 2006	-	5	5	70	100	80	2

Note:

All Values Over IDEML RISC Default Industrial Cleanup Level in RED

All Values Over IDEML RISC Default Residential Cleanup Level in BLUE

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**Table 5**  
**Monitoring Well Groundwater Analytical Results**  
**Fourth Quarter 2008**  
**Michigan Plaza**  
**3801-3823 W. Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
MMW-P-05	11/8/2005	<5.0	<5.0	6.2	<5.0	<5.0	<2.0
	2/22/2007	23.7	<5.0	9.1	<5.0	<5.0	<2.0
	6/14/2007	<5.0	<5.0	18.8	<5.0	<5.0	<2.0
	9/19/2007	<5.0	<5.0	18.8	<5.0	<5.0	<2.0
	12/14/2007	<5.0	<5.0	14.8	<5.0	<5.0	<2.0
	3/20/2008	<5.0	<5.0	8.1	<5.0	<5.0	<2.0
	6/5/2008	<5.0	<5.0	15.6	<5.0	<5.0	<2.0
	9/11/2008	<5.0	<5.0	16.7	<5.0	<5.0	<2.0
	11/19/2008	<5.0	<5.0	22.1	<5.0	<5.0	<2.0
MMW-P-06	11/8/2005	<5.0	<5.0	200	24	<5.0	21
	2/22/2007	<5.0	<5.0	158	19.2	<5.0	<2.0
	6/14/2007	<5.0	<5.0	214	22.7	<5.0	13.3
	9/19/2007	<5.0	<5.0	283	38.2	<5.0	26.1
	12/14/2007	<5.0	<5.0	260	40	<5.0	31
	3/20/2008	<5.0	<5.0	250	31	<5.0	26
	6/5/2008	<5.0	<5.0	265	30.9	<5.0	40.1
	9/11/2008	<5.0	<5.0	271	33.3	<5.0	<2.0
	11/19/2008	<5.0	<5.0	292	<5.0	<5.0	61.4
MMW-P-07	2/22/2007	3,060	81.5	82	8.8	<5.0	<2.0
	6/14/2007	2,850	90	82.5	<50.0	<50.0	<20.0
	9/20/2007	5,200	109	121	16.1	<5.0	2
	12/13/2007	1,440	157	930	8.8	7.4	80
	3/21/2008	31	7.6	1,700	27	<5.0	110
	6/5/2008	<5.0	<5.0	938	15.6	<5.0	466
	9/11/2008	<5.0	<5.0	1,870	55.2	<5.0	1,620
	11/19/2008	<5.0	<5.0	797	<5.0	<5.0	749
MMW-P-08	2/22/2007	6,280	281	240	26.7	<5.0	<2.0
	6/14/2007	6,440	310	169	<50.0	<50.0	<20.0
	9/20/2007	9,780	494	201	25.3	<5.0	6.5
	12/14/2007	390	210	5,800	<50.0	<50.0	<20.0
	3/21/2008	6.7	11	6,500	130	<5.0	55
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	562
	9/11/2008	5.8	5	18,300	686	<50.0	4,740
	11/19/2008	<50.0	<50.0	5,690	91.4	<50.0	13,000
MMW-P-09S	2/22/2007	10.0	<5.0	<5.0	<5.0	<5.0	<2.0
	6/14/2007	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	9/19/2007	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	12/12/2007	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	3/20/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	9/11/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	11/19/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
IDEML RISC Default Industrial Cleanup Level - 2006	-	55	31	1,000	2,000	1,000	4
IDEML RISC Default Residential Cleanup Level - 2006	-	5	5	70	100	80	2

Note:

All Values Over IDEML RISC Default Industrial Cleanup Level in RED

All Values Over IDEML RISC Default Residential Cleanup Level in BLUE

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

Green Shading indicates areas that appear to be undergoing reductive dechlorination due to CAP-18 Injections

"J" designation indicates concentration was estimated due to high concentration of one parameter requiring dilution on other parameter quantitations

"-" indicates geochemical parameter was not collected, "NV" indicates data was not valid due to equipment error

**Table 5**  
**Monitoring Well Groundwater Analytical Results**  
**Fourth Quarter 2008**  
**Michigan Plaza**  
**3801-3823 W. Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
MMW-P-09D	6/14/2007	<5.0	<5.0	<5.0	<5.0	<5.0	46.2
	9/19/2007	<5.0	<5.0	<5.0	<5.0	<5.0	83.1
	12/12/2007	<5.0	<5.0	<5.0	<5.0	<5.0	71
	3/20/2008	<5.0	<5.0	<5.0	<5.0	<5.0	3
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	100
	9/11/2008	<5.0	<5.0	<5.0	<5.0	<5.0	72.6
	11/19/2008	<5.0	<5.0	<5.0	<5.0	<5.0	97.2
MMW-P-10S	6/14/2007	36.1	36.3	61.6	6.9	<5.0	<2.0
	7/6/2007	87.9	54.9	92.1	10.2	<5.0	<2.0
	9/19/2007	192	82.6	126	14.4	<5.0	<2.0
	12/14/2007	71	<5.0	<5.0	<5.0	<5.0	2.4
	3/20/2008	26.8	19.2	250	12.2	<5.0	<2.0
	6/5/2008	15	9.7	537	16	<5.0	114
	9/11/2008	74.8	36.5	1,650	74	<5.0	27.7
	11/19/2008	78.6	28	1,510	<5.0	<5.0	22.3
MMW-P-10D	6/14/2007	<5.0	10.6	481	7.7	<5.0	98.7
	7/6/2007	<5.0	<5.0	498	9	<5.0	118
	9/19/2007	<5.0	<5.0	350	<5.0	<5.0	76.1
	12/14/2007	<5.0	<5.0	270	<5.0	<5.0	77
	3/20/2008	<5.0	<5.0	<5.0	<5.0	<5.0	3
	6/5/2008	<5.0	<5.0	508	<5.0	<5.0	267
	9/11/2008	<5.0	<5.0	435	<5.0	<5.0	288
	11/19/2008	<5.0	<5.0	3,390	<5.0	<5.0	5,030
<b>IDEML RISC Default Industrial Cleanup Level - 2006</b>		<b>55</b>	<b>31</b>	<b>1,000</b>	<b>2,000</b>	<b>1,000</b>	<b>4</b>
<b>IDEML RISC Default Residential Cleanup Level - 2006</b>		<b>5</b>	<b>5</b>	<b>70</b>	<b>100</b>	<b>80</b>	<b>2</b>

Note:

All Values Over IDEML RISC Default Industrial Cleanup Level in **RED**

All Values Over IDEML RISC Default Residential Cleanup Level in **BLUE**

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

Green Shading indicates areas that appear to be undergoing reductive dechlorination due to CAP-18 Injections

"J" designation indicates concentration was estimated due to high concentration of one parameter requiring dilution on other parameter quantitations

"-" indicates geochemical parameter was not collected, "NV" indicates data was not valid due to equipment error

**Table 5**  
**Monitoring Well Groundwater Analytical Results**  
**Fourth Quarter 2008**  
**Michigan Plaza**  
**3801-3823 W. Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
<b>Keramida Monitoring Wells (Off-site)</b>							
MW-167S	11/7/2005	<5.0	<5.0	<5.0	<5.0		14
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
MW167D	11/7/2005	<5.0	<5.0	750	<5.0		110
	6/5/2008	<5.0	<5.0	616	28	<5.0	43.8
MW-168S	11/7/2005	280	16	53	<5.0	<5.0	3
	2/21/2007	30.1	8.8	155	<5.0	<5.0	29.6
	6/14/2007	<5.0	<5.0	40.8	<5.0	<5.0	34
	9/19/2007	32.6	8	82.4	<5.0	<5.0	3.5
	12/13/2007	52	14	78	<5.0	<5.0	4.1
	3/20/2008	92	12	46	<5.0	<5.0	4.2
	6/5/2008	80.4	10.1	41.1	<5.0	<5.0	3.6
	9/11/2008	68.5	10.8	66.9	<5.0	<5.0	5.5
	11/19/2008	NS	NS	NS	NS	NS	NS
MW-168D	11/7/2005	<5.0	<5.0	6.8	<5.0	<5.0	49
	2/21/2007	<5.0	<5.0	8.4	<5.0	<5.0	58.1
	6/14/2007	<5.0	<5.0	5.2	<5.0	<5.0	47.5
	9/19/2007	<5.0	<5.0	<5.0	<5.0	<5.0	89.7
	12/12/2007	<5.0	<5.0	<5.0	<5.0	<5.0	74
	3/20/2008	<5.0	<5.0	8	<5.0	<5.0	39
	6/5/2008	<5.0	<5.0	13.4	<5.0	<5.0	65.9
	9/11/2008	<5.0	<5.0	5.5	<5.0	<5.0	<2
MW-169S	11/7/2005	<5.0	<5.0	<5.0	<5.0		<2.0
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
MW-169D	11/7/2005	<5.0	<5.0	<5.0	<5.0		5.1
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	14.3
MW-170S	6/3/2008	<5.0	<5.0	<5.0	<5.0	<5.0	5.5
MW-170D	6/3/2008	<5.0	<5.0	<5.0	<5.0	<5.0	230
MW-171S	6/3/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
MW-171D	6/3/2008	<5.0	<5.0	<5.0	<5.0	<5.0	3
<b>Floral Park Cemetery Wells (Off-site)</b>							
MMW-C-01	11/20/2008	15.7	8.3	296	<5.0	<5.0	<2.0
MMW-C-02	11/20/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
<b>IDEML RISC Default Industrial Cleanup Level - 2006</b>	-	<b>55</b>	<b>31</b>	<b>1,000</b>	<b>2,000</b>	<b>1,000</b>	<b>4</b>
<b>IDEML RISC Default Residential Cleanup Level - 2006</b>	-	<b>5</b>	<b>5</b>	<b>70</b>	<b>100</b>	<b>80</b>	<b>2</b>

Note:

All Values Over IDEML RISC Default Industrial Cleanup Level in **RED**

All Values Over IDEML RISC Default Residential Cleanup Level in **BLUE**

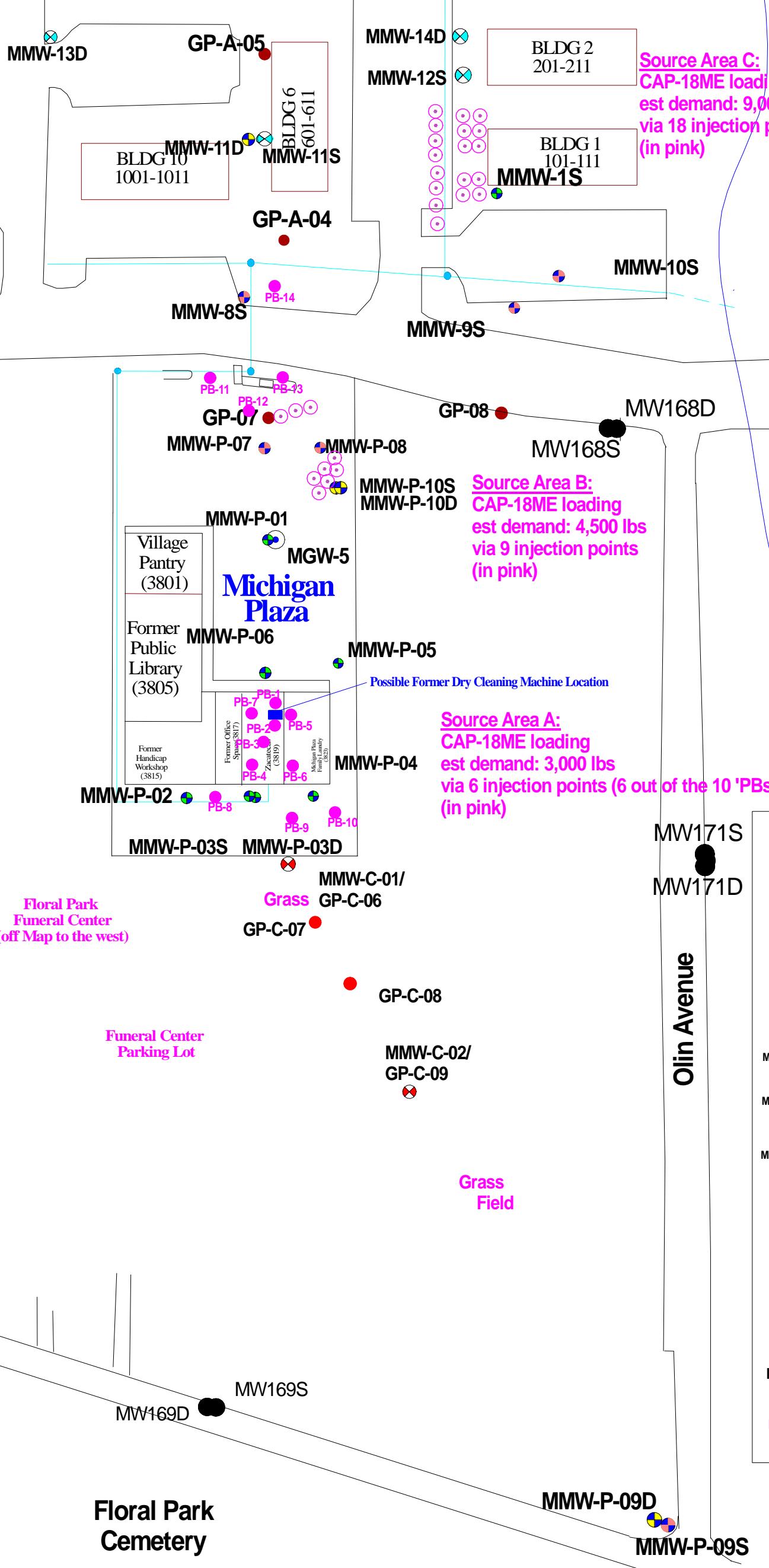
PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

Green Shading indicates areas that appear to be undergoing reductive dechlorination due to CAP-18 Injections

"J" designation indicates concentration was estimated due to high concentration of one parameter requiring dilution on other parameter quantitations

"-" indicates geochemical parameter was not collected, "NV" indicates data was not valid due to equipment error

## **FIGURES**



#### Round 2: Application Overview

Approx. 33-35 Chemical Injection Points, with varying loads dependent on aquifer ability to handle load per foot, utility locations, etc.

CAP-18 Injection occurred every 3 feet for the entire saturated zone down to hard till at load listed. General loading typically injected twice as much CAP18 in upper portion as lower portion of injection point.

Michigan Street

Little Eagle Creek



Keramida Monitoring Well Locations Referenced from Keramida Environmental, Inc.  
Project No. 2829  
March 13, 2002

#### LEGEND

- Roadway
- MW171S ● Keramida Monitoring Wells
- MUNDELL Sewer Sampling Locations (September & November 2005)
- GP-07 ● MUNDELL Soil Boring Locations (September 2005)
- MMW-P-06 ● MUNDELL Monitoring Wells (September 2005)
- MMW-P-07 ● MUNDELL Monitoring Wells (January 2007)
- MMW-11S ● MUNDELL Monitoring Wells (May-June 2007)
- Proposed Locations of Geoprobe Injected CAP-18 Chemical Stimulant (Round 2) (greater than 400 lbs)
- MMW-C-02/GP-C-09 ● MUNDELL Monitoring Wells (August 2008)
- MUNDELL Test Pit (TP-3) Sampling Location (April 2005)
- Anticipated Dry Cleaning Machine Location
- MW-12D ● MUNDELL Upgradient Monitoring Wells (November 2008)
- PB-4 ● Proposed MUNDELL Soil Boring Locations which could be potential CAP-18 injection point

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317-630-9060, fax 317-630-9065

Project Number:  
M01046

Drawing File:

Date Prepared:

12/23/09

Scale:

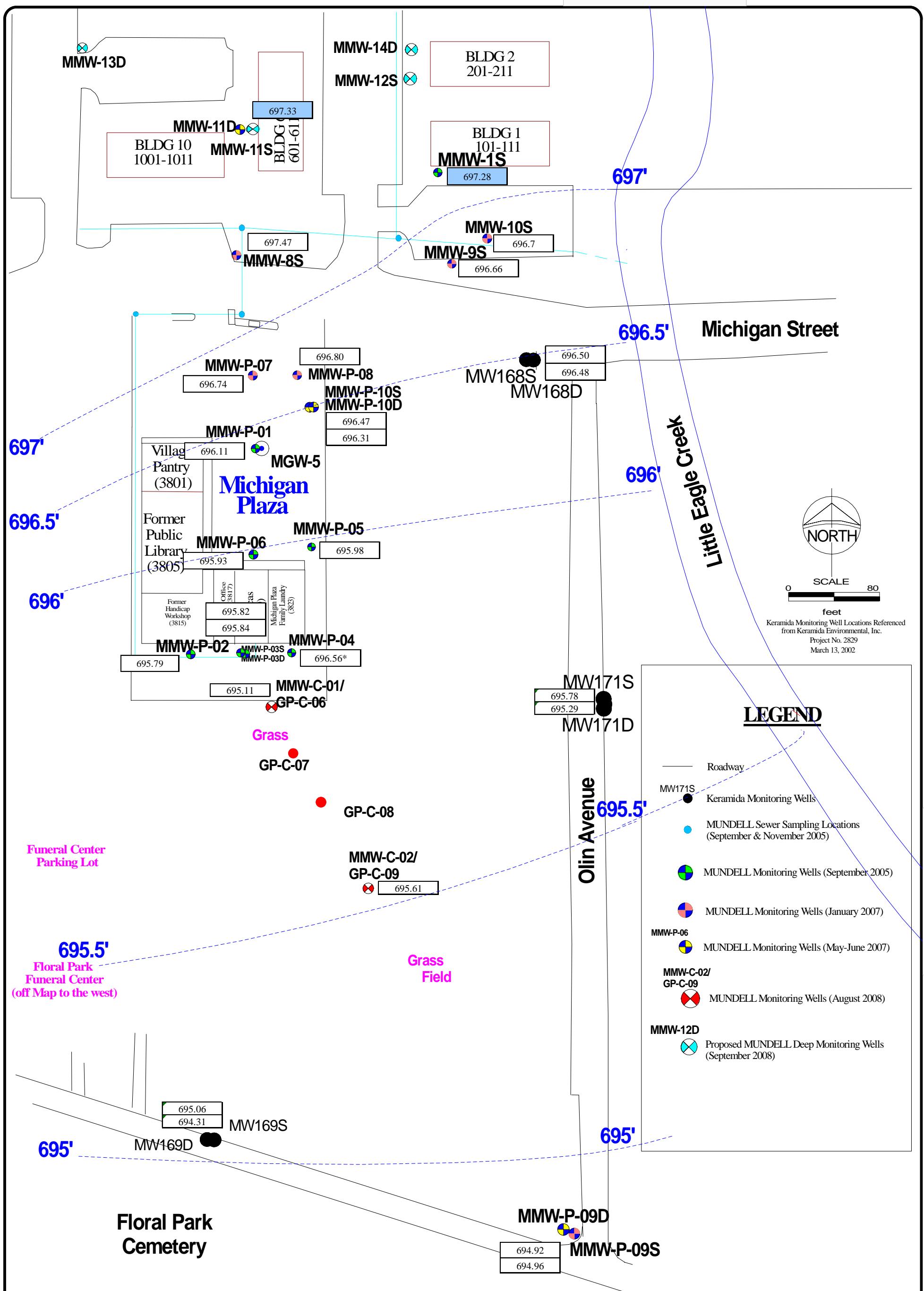
1"=80'

**Proposed CAP-18 Injection and Soil Testing Locations (Round 2)**

Michigan Plaza  
3801-3823 West Michigan Street  
Indianapolis, Indiana

**FIGURE**

**1**



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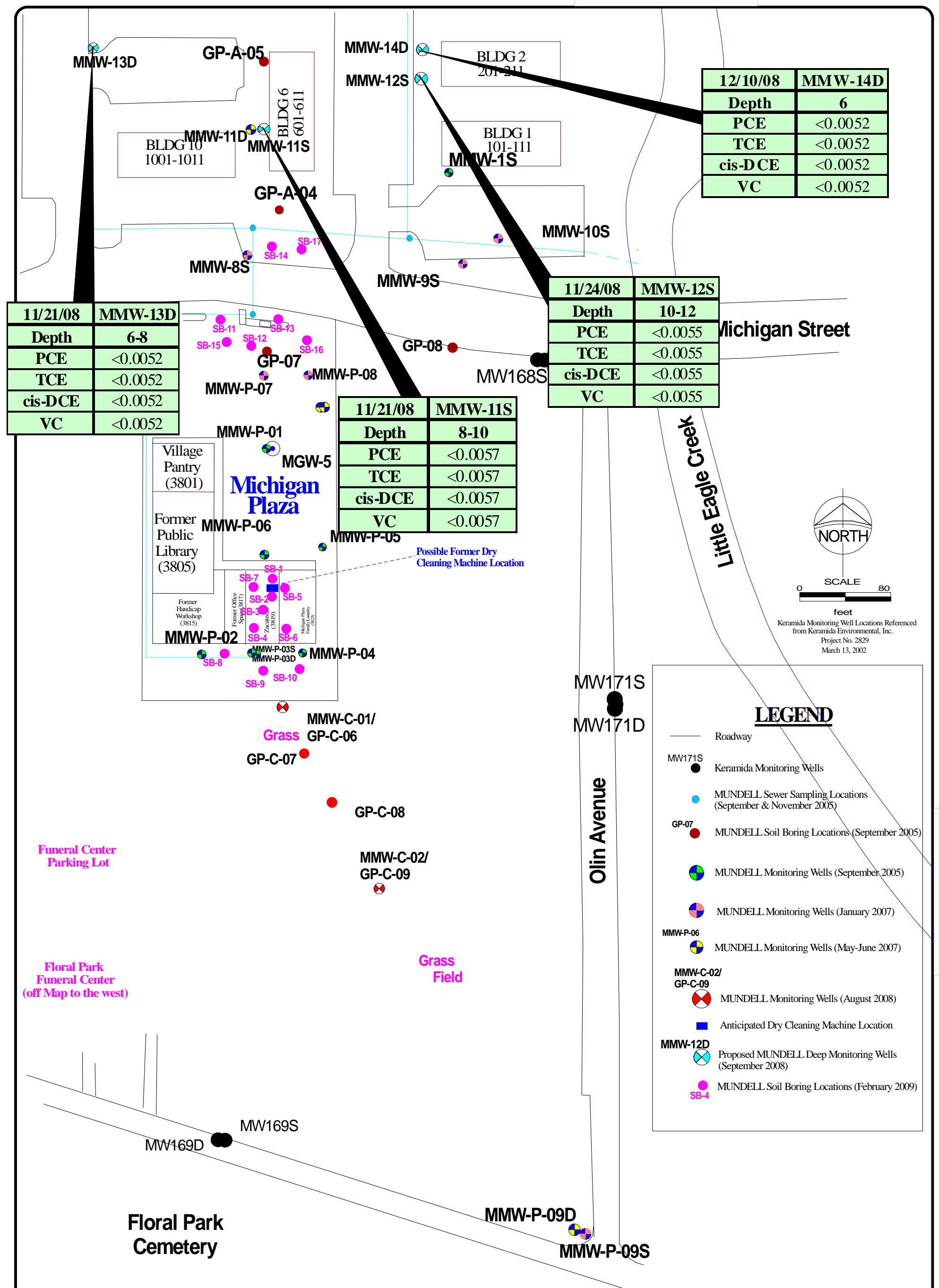
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Project Number:
M01046
Drawing File:
Date Prepared: 6/2/09
Scale: 1"=80'

**Potentiometric Surface Map (shallow)**  
November 19 - 20, 2008  
Fourth Quarter 2008  
Michigan Plaza  
3801-3823 West Michigan Street  
Indianapolis, Indiana

# FIGURE 2



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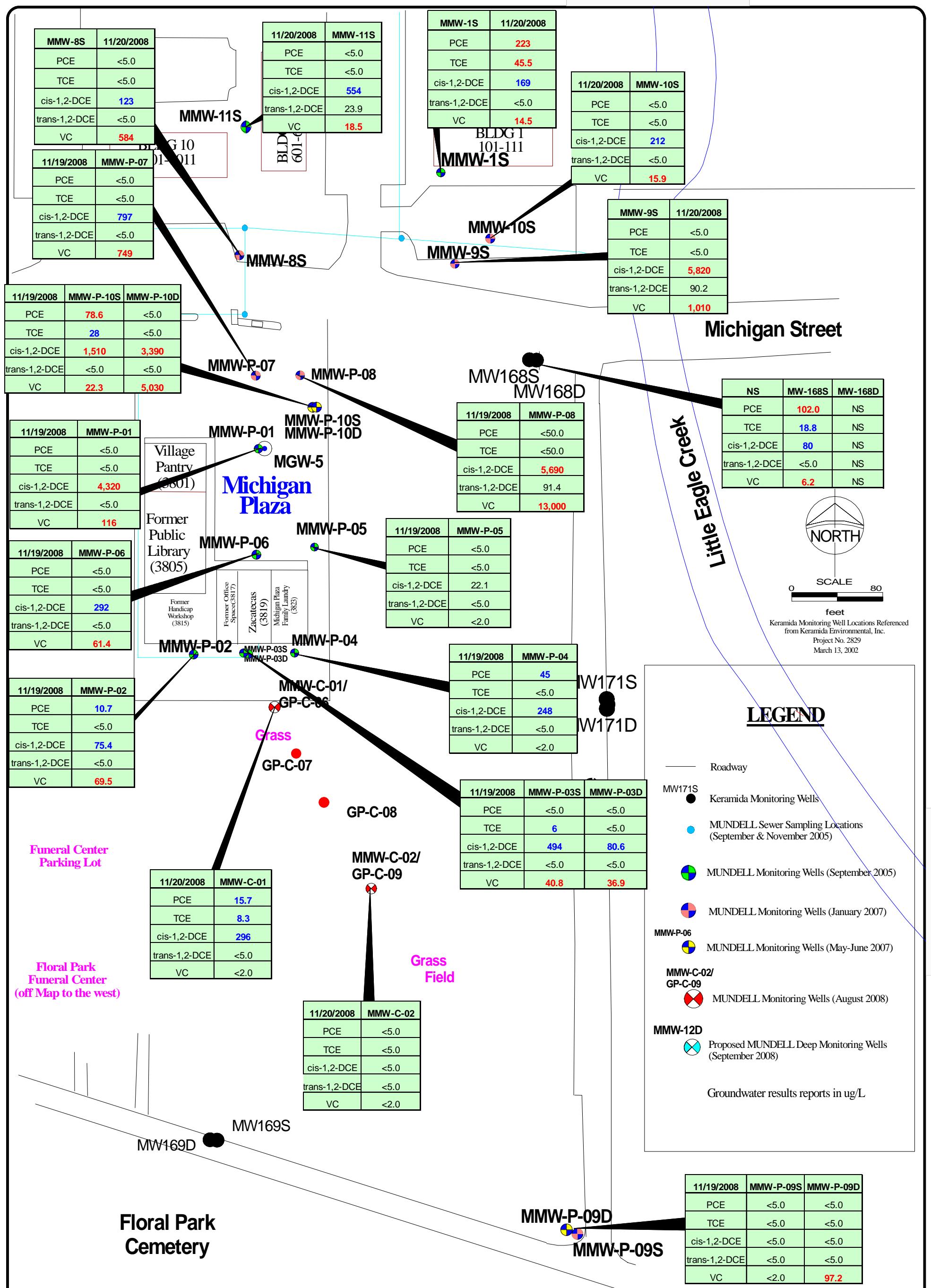
110 South Downey Avenue  
Indianapolis, Indiana 46219  
317-630-9060, fax 317-630-9065

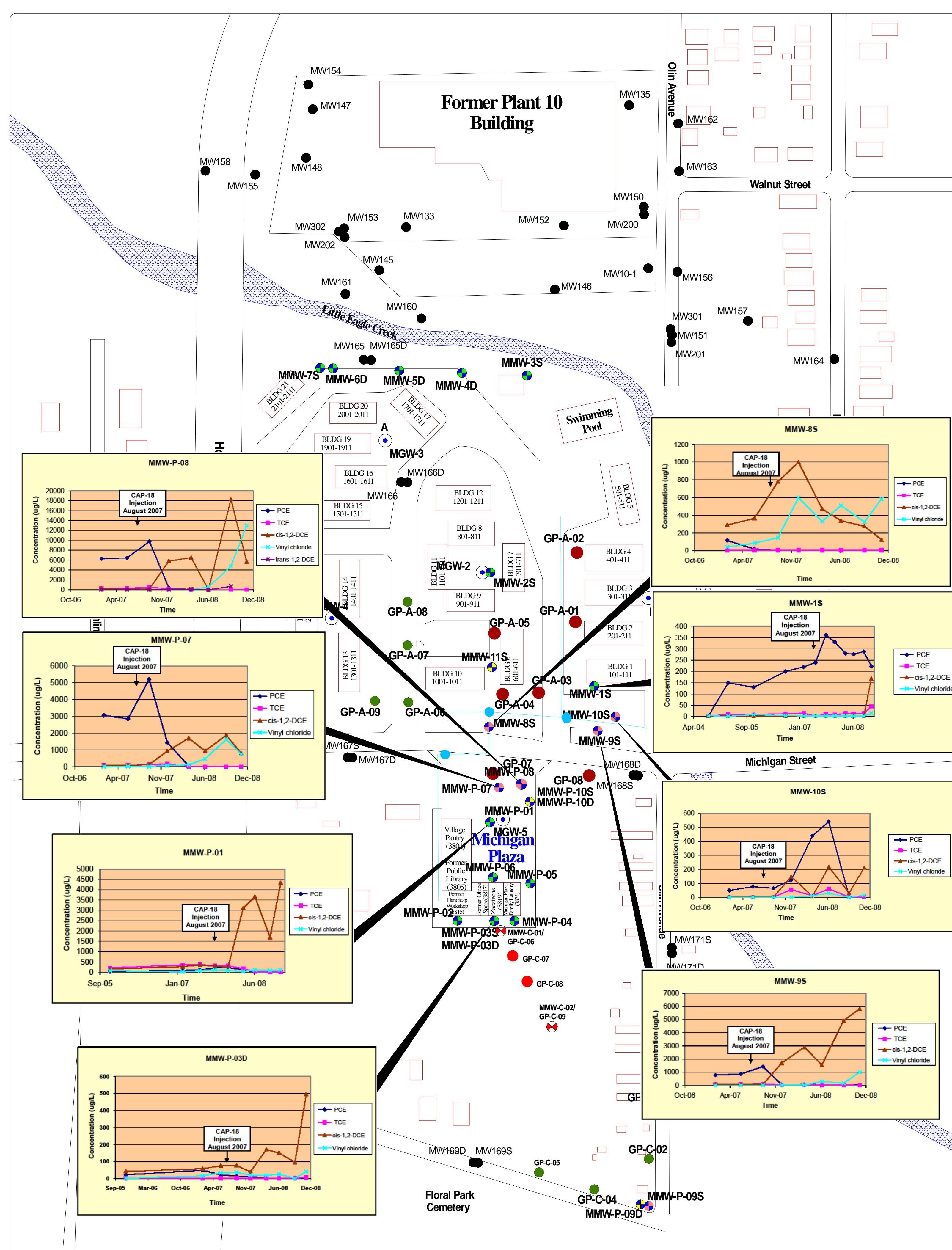
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Drawing File:  
Date Prepared: 3/5/09  
Scale: 1"=80'

**FURTHER SOIL DELINEATION**

Fourth Quarter 2008  
Michigan Plaza  
3801-3823 West Michigan Street  
Indianapolis, Indiana

**FIGURE**  
**3**





## LEGEND

- ## LEGEND
- Mundell Test Pit (TP-3) Sampling Locations (April 2005)
  - Sewer Excavation Sampling Locations (October 2007)
  - Fence
  - Sewer Line
  - MMW-11S** ● MUNDELL Monitoring Wells (May-June 2007)
  - MW160** ● Keramida Monitoring Wells
  - SS-P-01** ● MUNDELL Sewer Sampling Locations/manholes (September & November 2005)
  - GP-07** ● MUNDELL Soil Boring Locations (September 2005)
  - MMW-P-06** ● MUNDELL Monitoring Wells, Michigan Plaza (September 2005)
  - GP-C-04** ● MUNDELL Soil Boring Locations (January 2007)
  - MMW-P-07** ● MUNDELL Monitoring Wells (January 2007)
  - MMW-C-01** MUNDELL Monitoring Wells (July/August 2008)
  - GP-C-06** MUNDELL Soil Boring Locations (July/August 2008)

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Project Number:	M01046
Drawing File:	Base Map.SKF
Date Prepared:	6/2/2009
Scale:	

# **Indicator Compound Trends in Groundwater**

## **Fourth Quarter 2008**

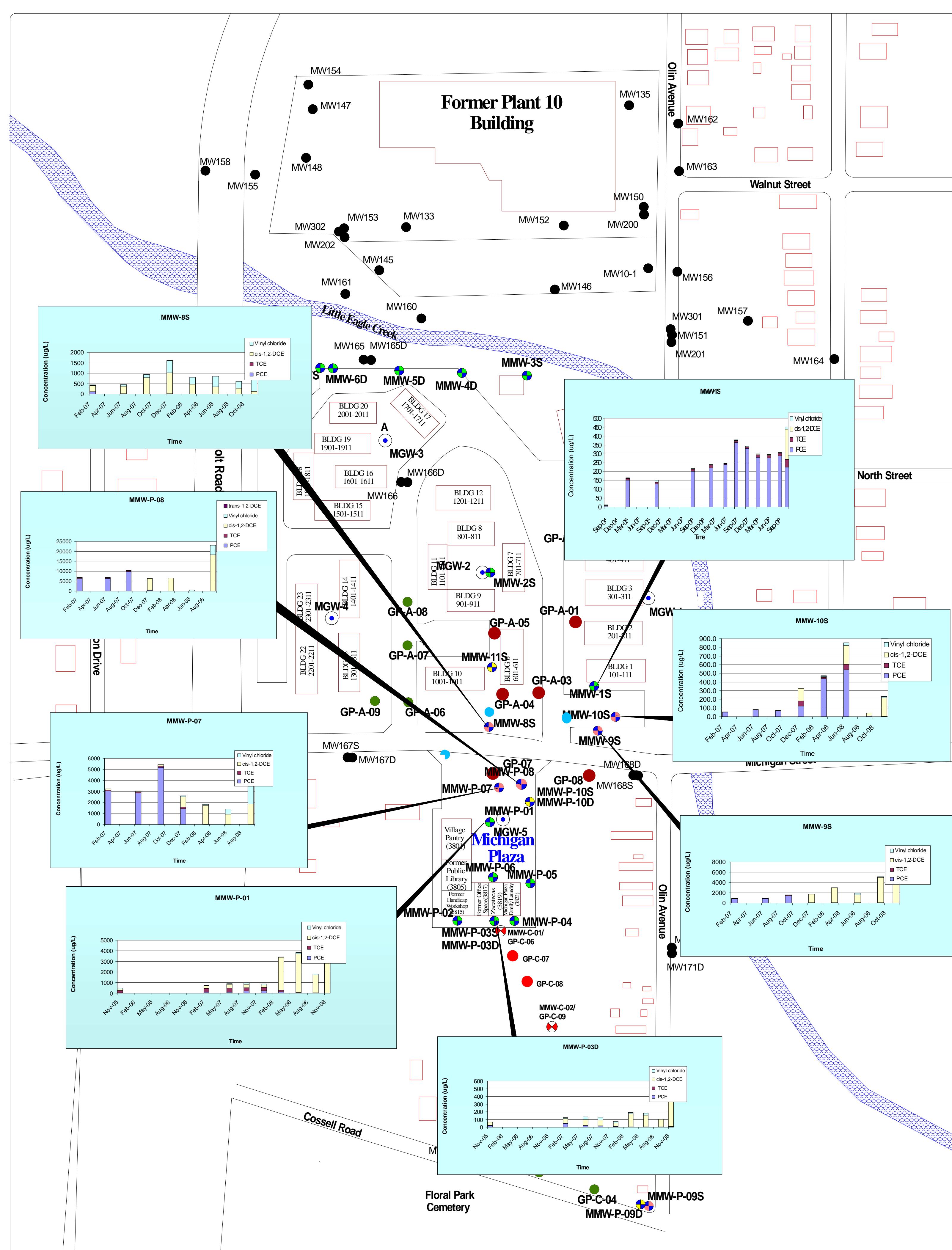
### **Michigan Plaza**

#### **3801-3823 West Michigan Street**

#### **Indianapolis, Indiana**

# FIGURE

# 5



## LEGEND

- ## LEGEND
- Mundell Test Pit (TP-3) Sampling Locations (April 2005)
  - Sewer Excavation Sampling Locations (October 2007)
  - Fence
  - Sewer Line
  - MMW-11S**  MUNDELL Monitoring Wells (May-June 2007)
  - MW160** ● Keramida Monitoring Wells
  - SS-P-01** ● MUNDELL Sewer Sampling Locations/manholes (September & November 2005)
  - GP-07** ● MUNDELL Soil Boring Locations (September 2005)
  - MMW-P-06**  MUNDELL Monitoring Wells, Michigan Plaza (September 2005)
  - GP-C-04** ● MUNDELL Soil Boring Locations (January 2007)
  - MMW-P-07**  MUNDELL Monitoring Wells (January 2007)
  - MMW-C-01** MUNDELL Monitoring Wells (July/August 2008)
  - GP-C-06** MUNDELL Soil Boring Locations (July/August 2008)

# feet

Project No. 282

Project No. 282  
March 13, 2002

March 13, 2002

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# **Parent and Daughter Products Distribution in Groundwater**

## **Fourth Quarter 2008**

### **Michigan Plaza**

### **3801-3823 West Michigan Street**

### **Indianapolis, Indiana**

# FIGURE

# 6

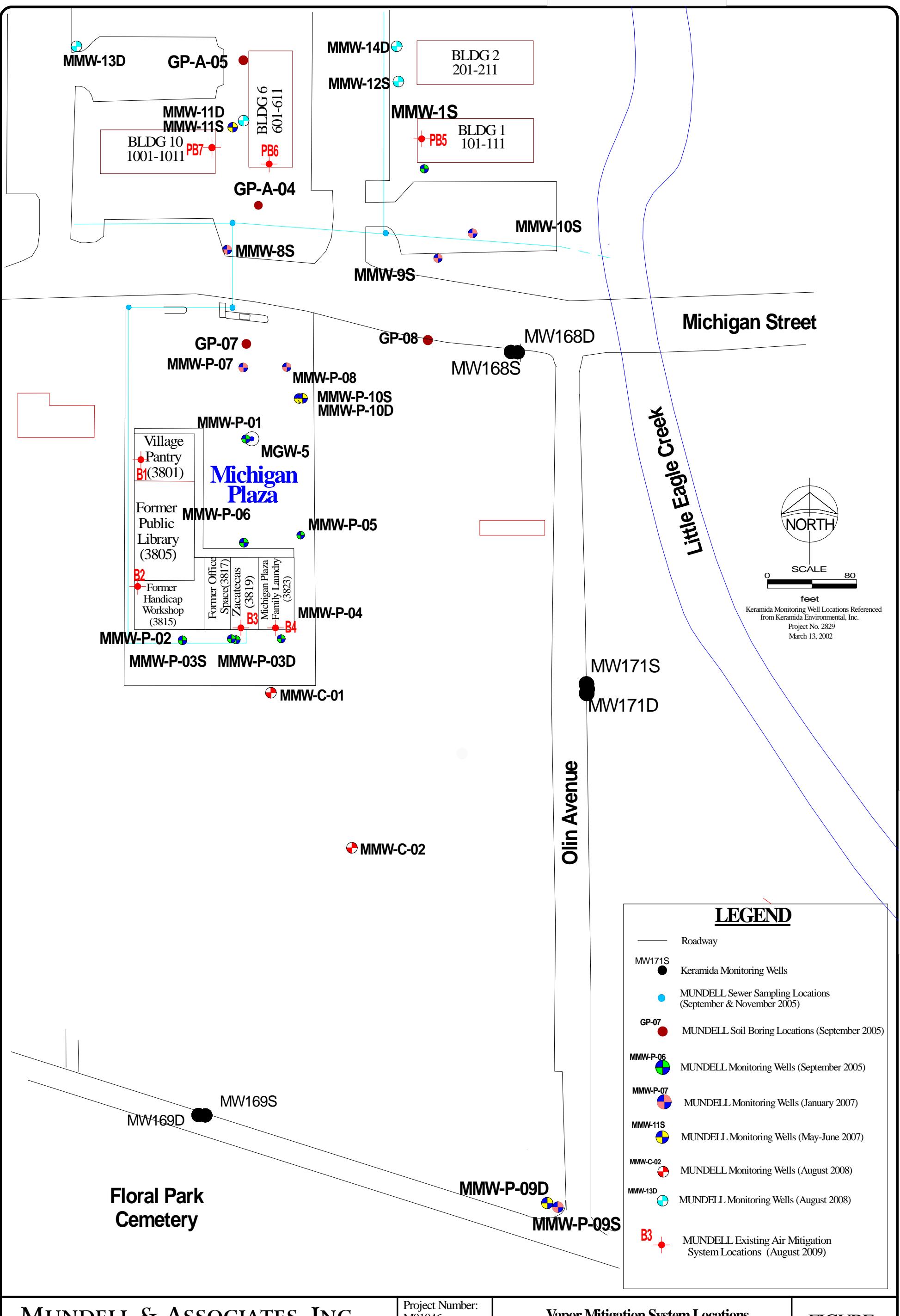


Figure 8a PCE Vapor Concentrations Trend - Village Pantry Vapor Mitigation System

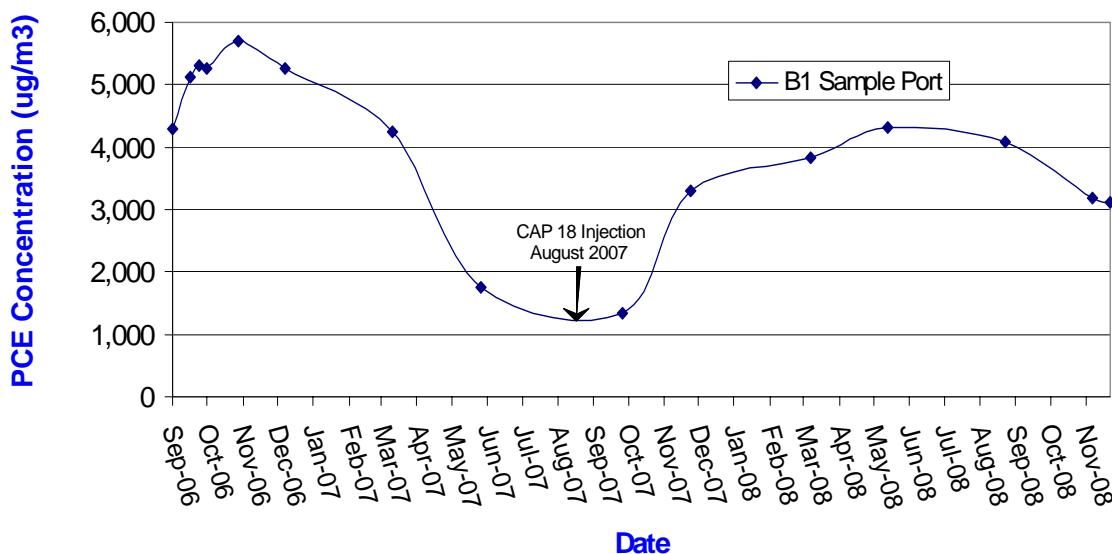
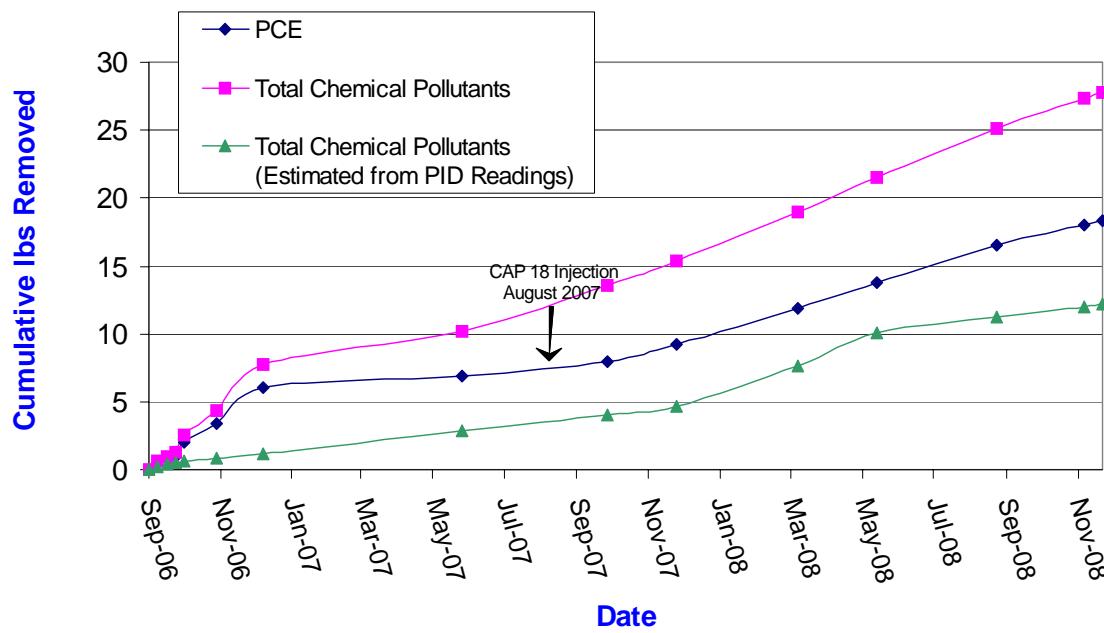
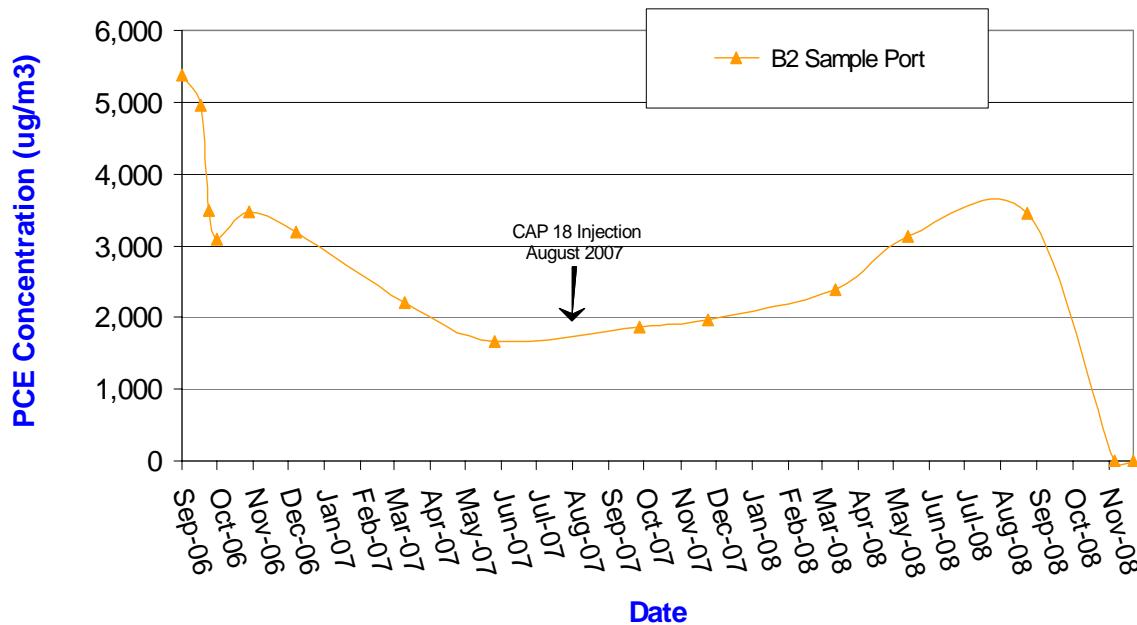


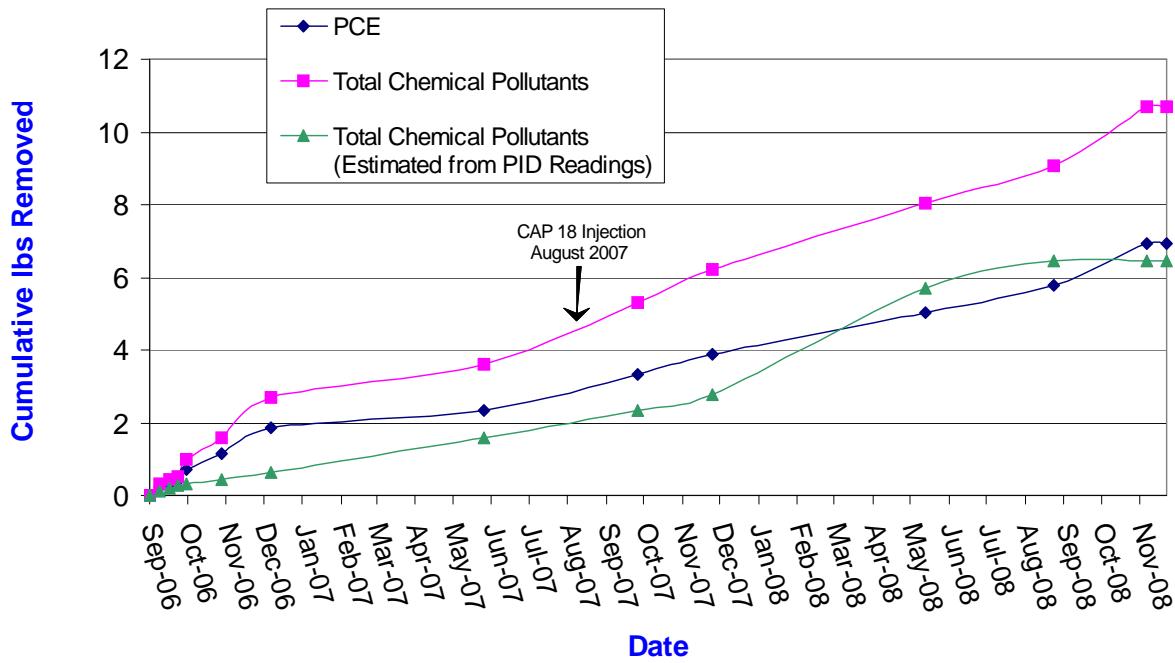
Figure 8b Chemical Pounds Removed: Vapor Mitigation System (Village Pantry)



**Figure 9a PCE Vapor Concentrations Trend - Handicap Space Vapor Mitigation System**



**Figure 9b Chemical Pounds Removed - Vapor Mitigation System (Handicap Space)**



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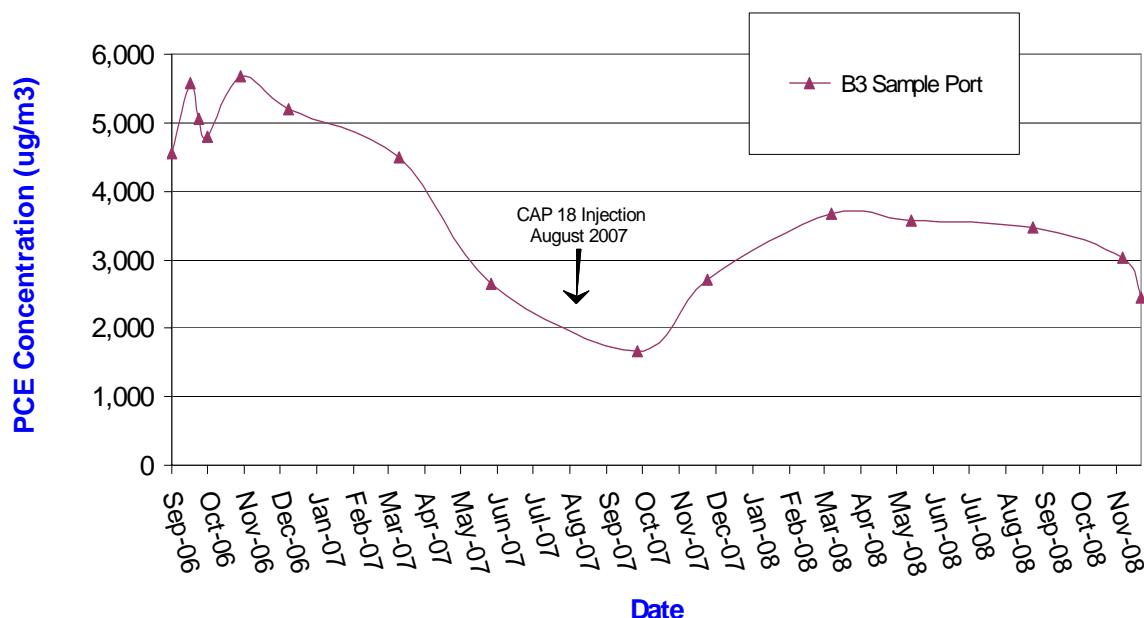
110 South Downey Avenue  
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317-630-9060, fax 317-630-9065

Project Number:  
M01046  
Drawing File:  
  
Date Prepared:  
6/3/2009  
Scale:  
no scale

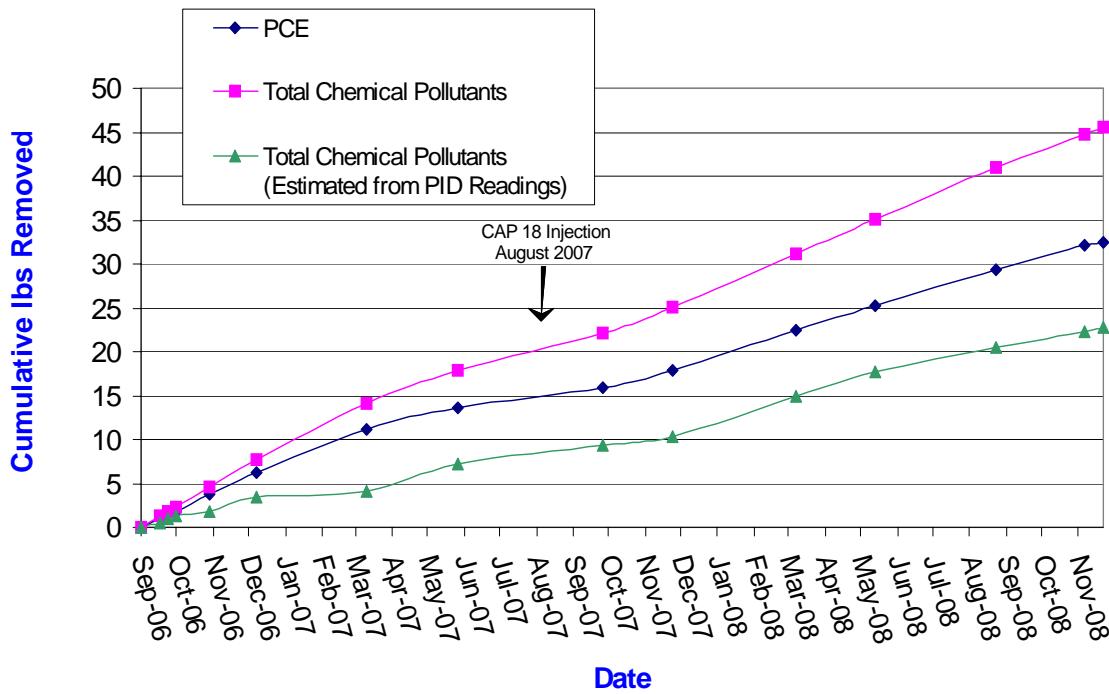
PCE Concentration Trends and Cumulative Pounds Removed  
Vapor Mitigation Systems B-2 (Handicap Space)  
Fourth Quarter 2008  
Michigan Plaza  
3801-3823 West Michigan Avenue  
Indianapolis, Indiana

FIGURE  
9

**Figure 10a PCE Vapor Concentrations Trend - Mexican Store Vapor Mitigation Systems**



**Figure 10b Chemical Pounds Removed: Vapor Mitigation System B3: Mexican Store**



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Drawing File:

Date Prepared:

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Scale:

no scale

PCE Concentration Trends and Cumulative Pounds Removed  
Vapor Mitigation Systems B-3 (Mexican Store)

Fourth Quarter 2008

Michigan Plaza

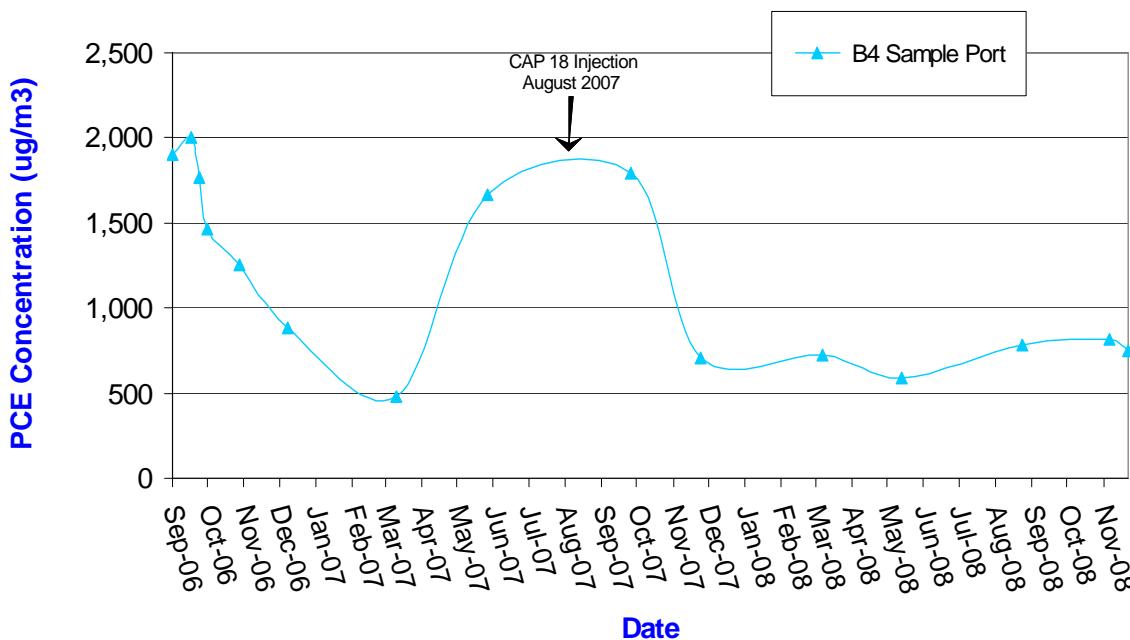
3801-3823 West Michigan Avenue

Indianapolis, Indiana

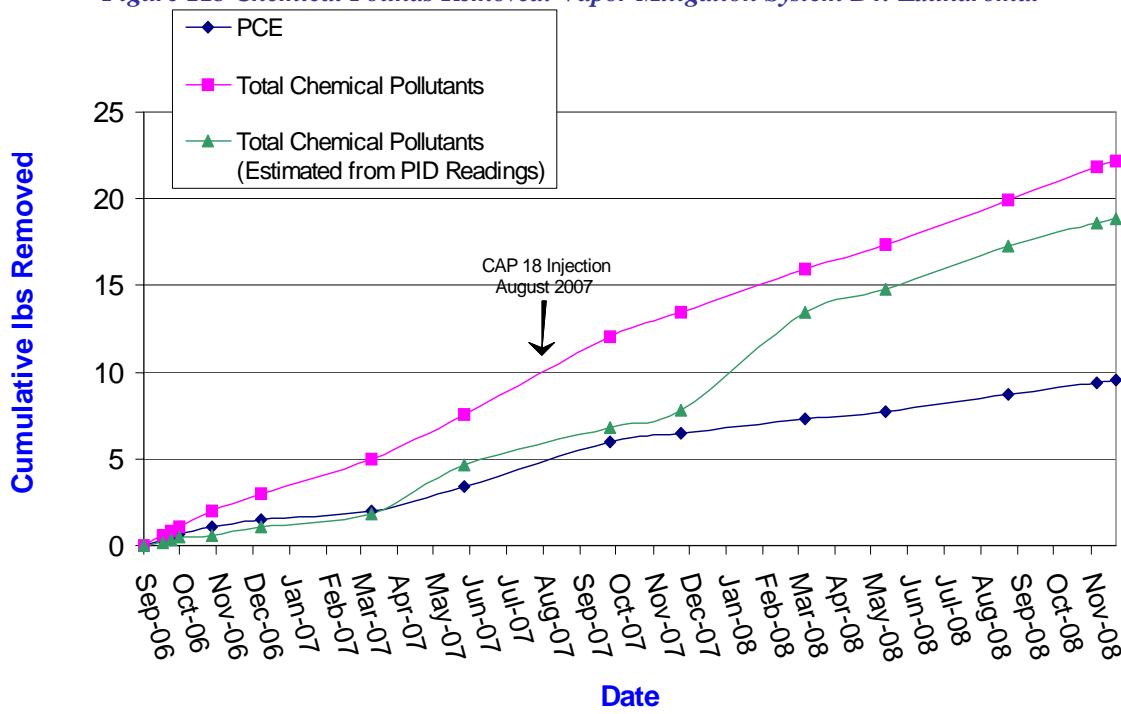
FIGURE

10

**Figure 11a PCE Vapor Concentrations Trend - Laundromat Vapor Mitigation System**



**Figure 11b Chemical Pounds Removed: Vapor Mitigation System B4: Laundromat**



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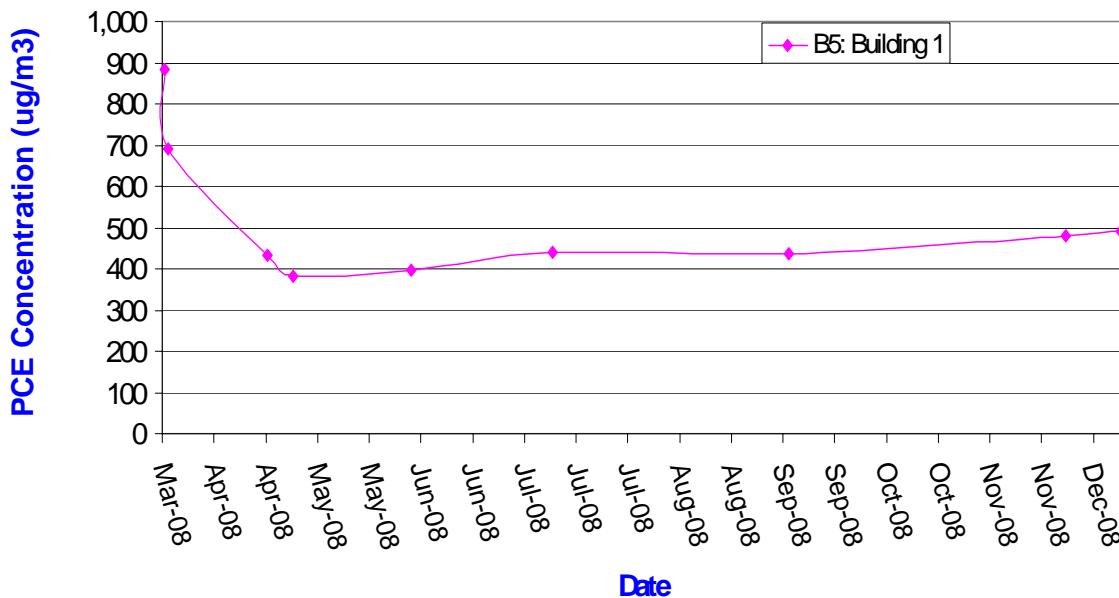
110 South Downey Avenue  
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317-630-9060, fax 317-630-9065

Project Number:  
M01046  
Drawing File:  
  
Date Prepared:  
6/3/2009  
Scale:  
no scale

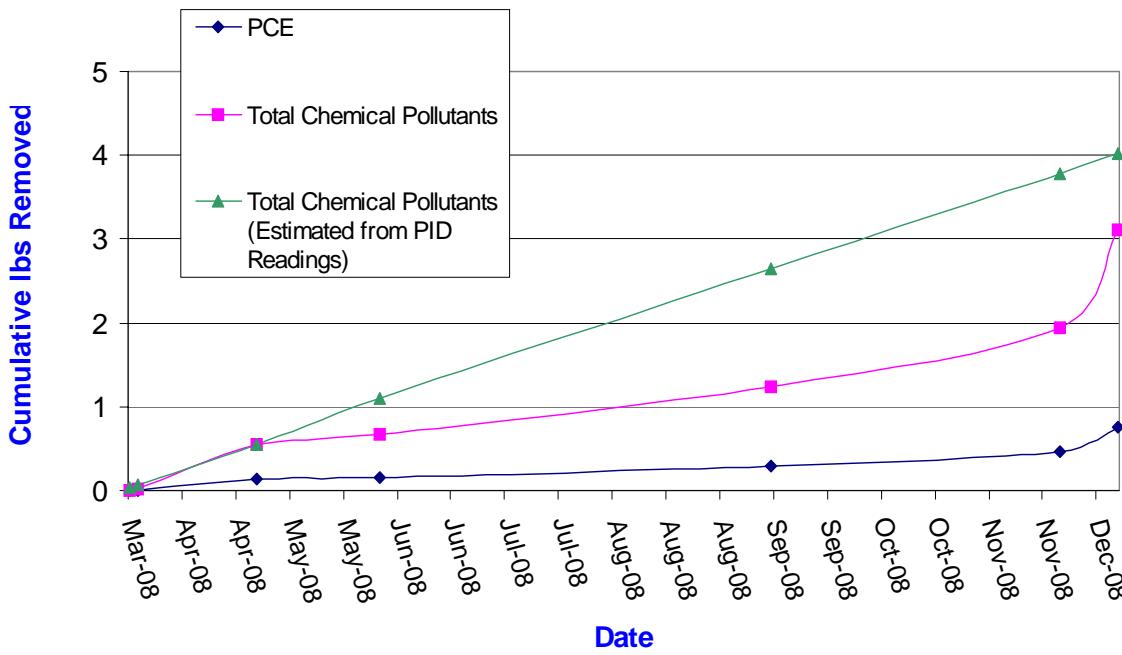
PCE Concentration Trends and Cumulative Pounds Removed  
Vapor Mitigation Systems B-4 (Laundromat)  
Fourth Quarter 2008  
Michigan Plaza  
3801-3823 West Michigan Avenue  
Indianapolis, Indiana

**FIGURE**  
**11**

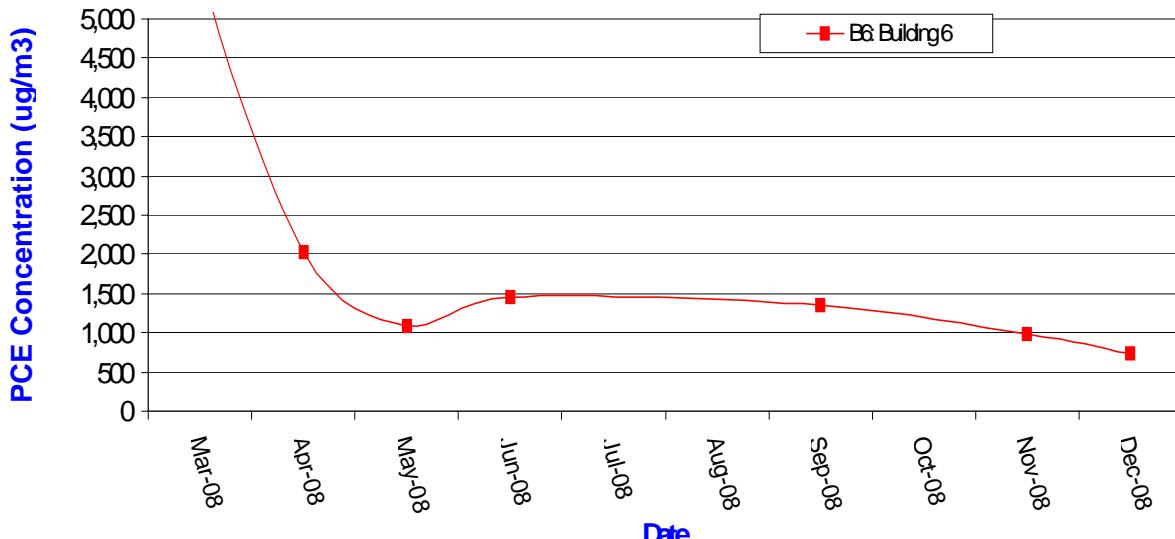
**Figure 12a PCE Vapor Concentrations Trend - Apartments Vapor Mitigation Systems: Building 1**



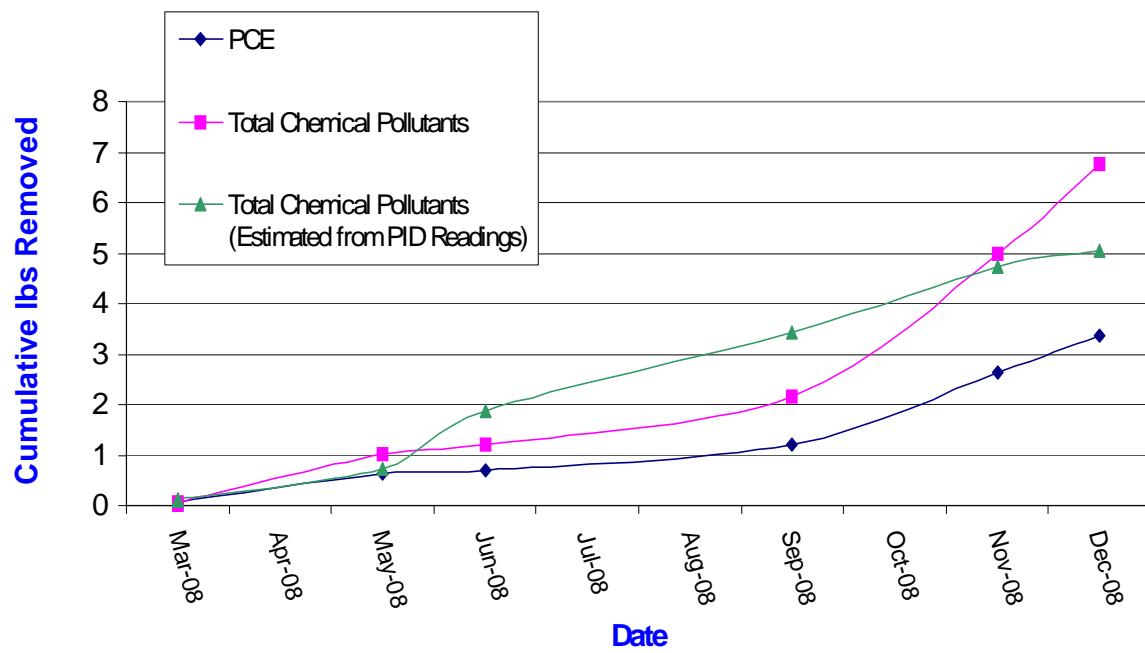
**Figure 12b Chemical Pounds Removed: Vapor Mitigation System B5: Apartments**



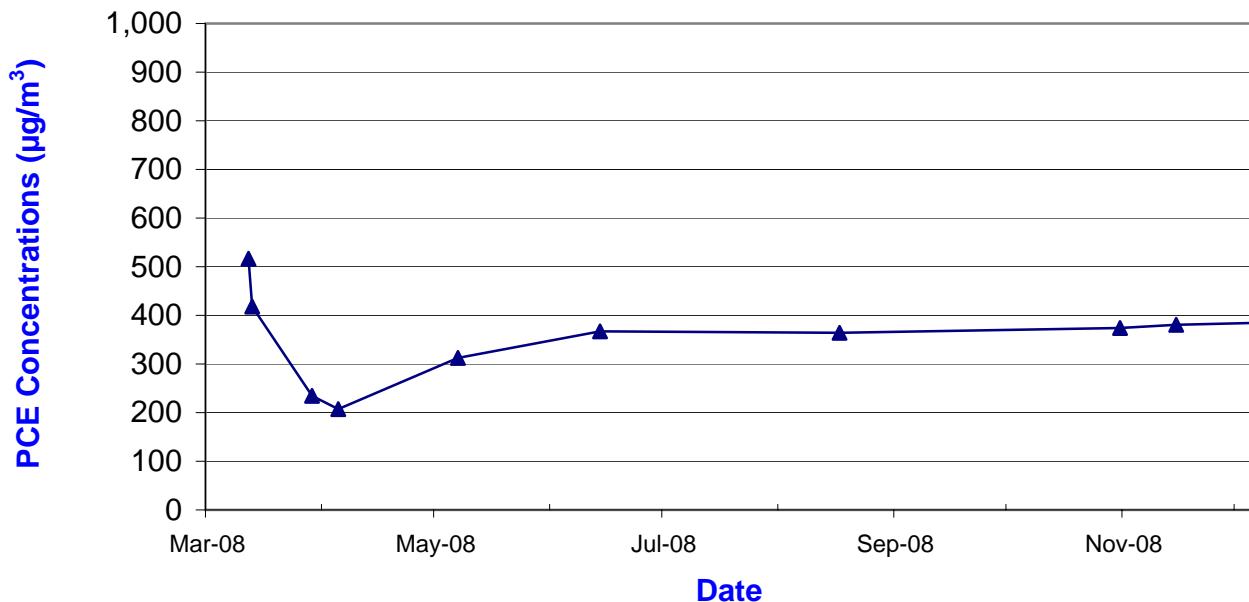
*Figure 13a PCE Vapor Concentrations Trend - Apartments Vapor Mitigation Systems: Building 6*



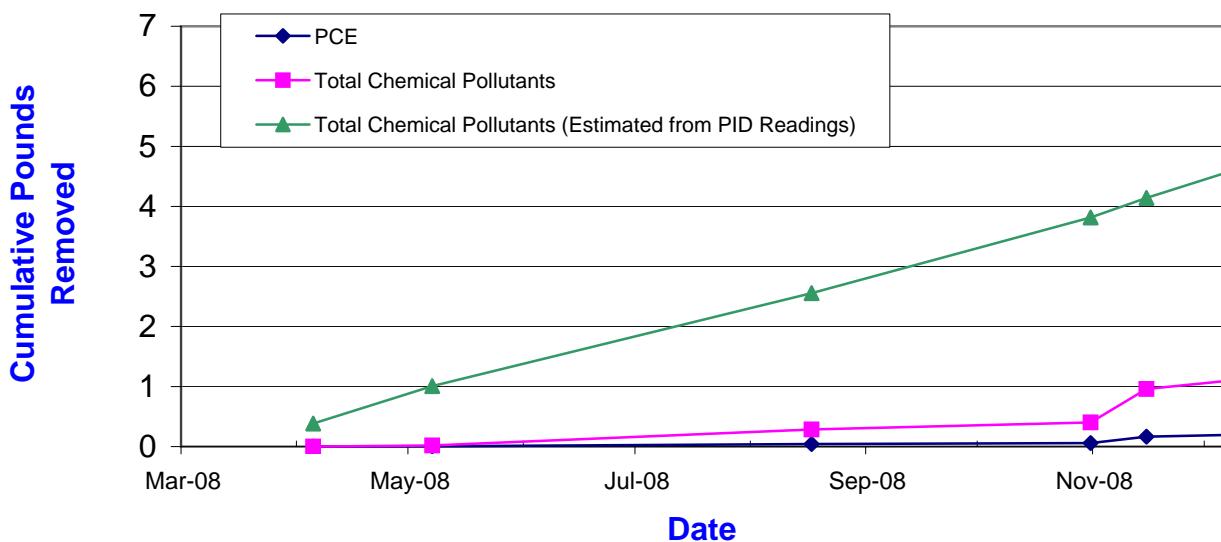
*Figure 13b Chemical Pounds Removed: Vapor Mitigation System B6: Apartments*



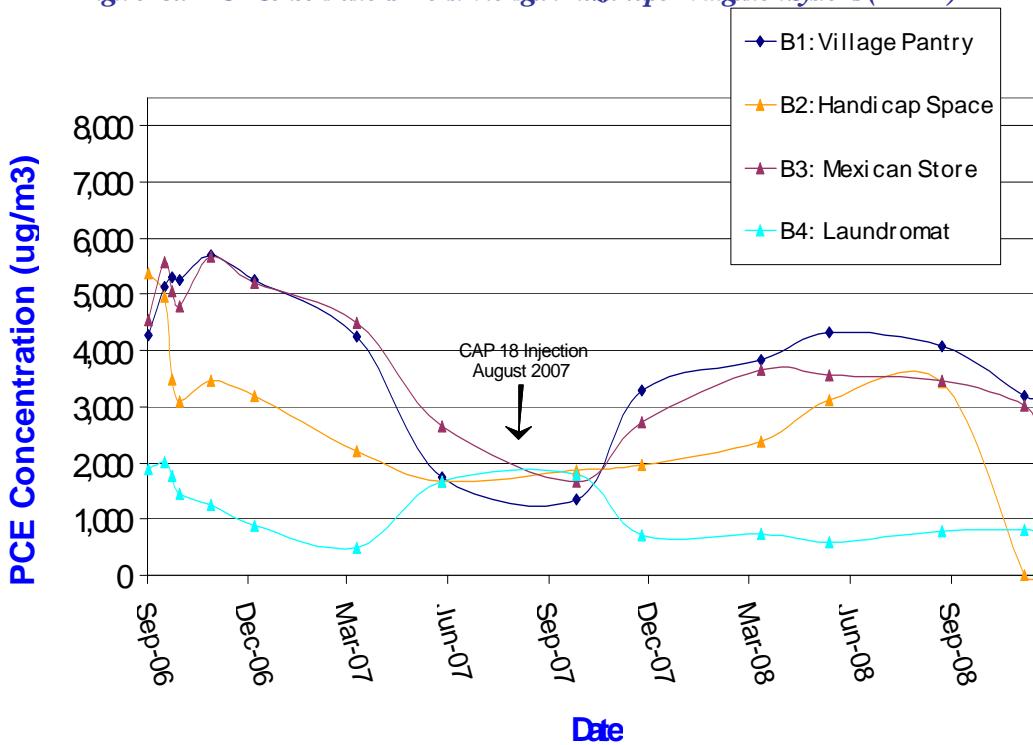
**PCE Vapor Concentrations Trend - Apartment Building 10 Vapor Mitigation System (B7)**



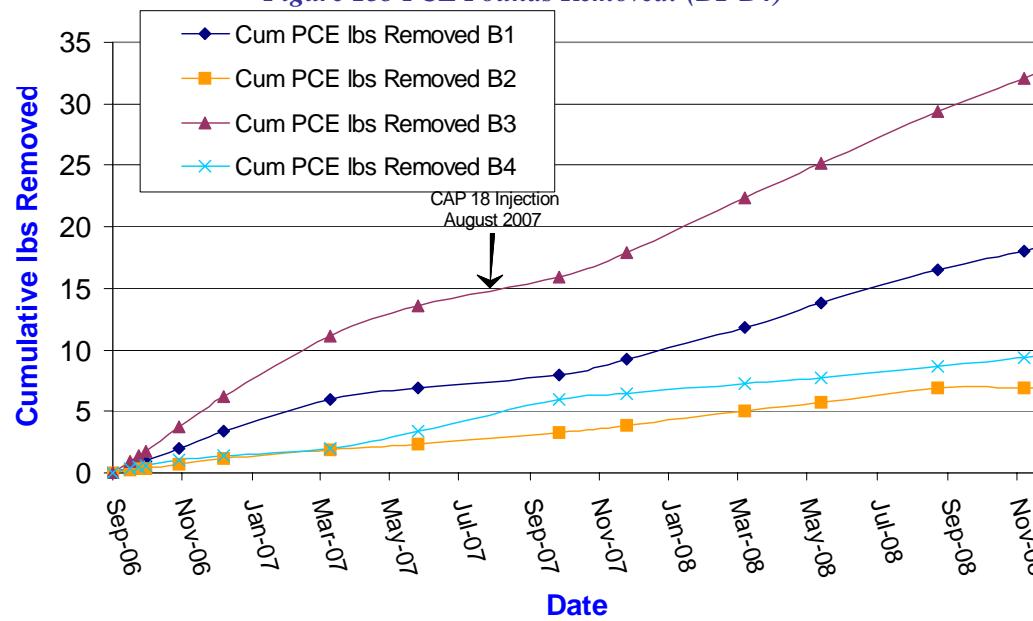
**Chemical Pounds Removed - Apartment Building 10 Vapor Mitigation System (B7)**



**Figure 15a - PCE Concentrations Trend Michigan Plaza Vapor Mitigation Systems (B1 - B4)**



**Figure 15b PCE Pounds Removed: (B1-B4)**



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317-630-9060, fax 317-630-9065

Project Number:  
M01046

Drawing File:

Date Prepared:

6/3/2009

Scale:

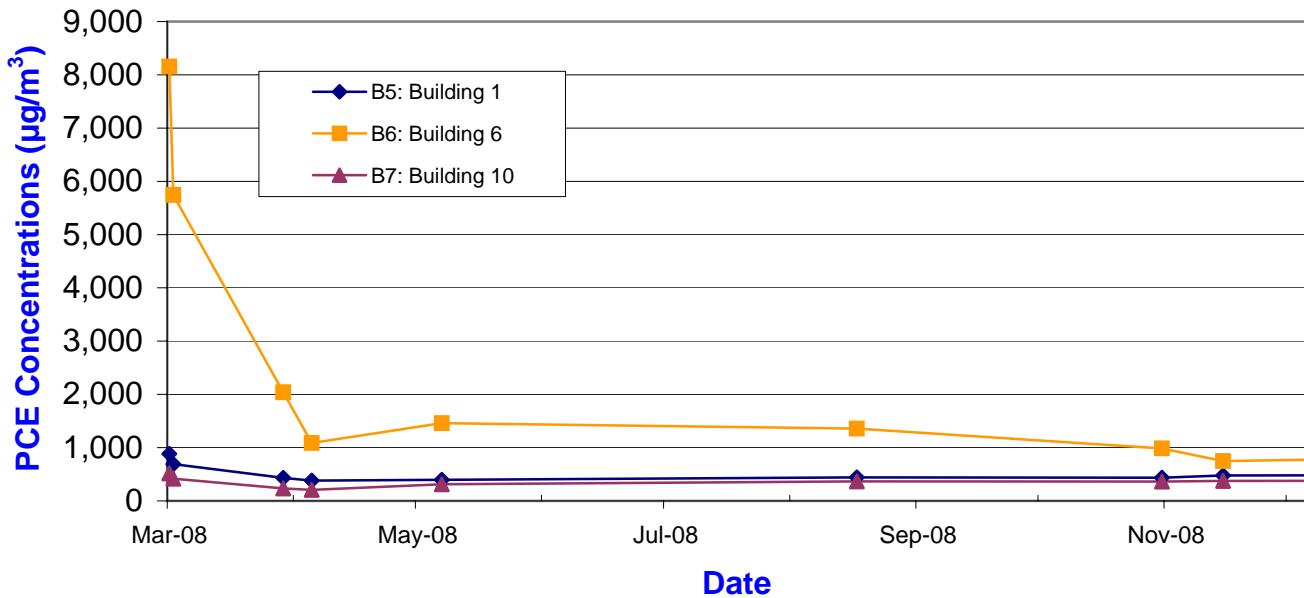
no scale

PCE Concentration Trends and Cumulative Pounds Removed  
Vapor Mitigation Systems B-1 - B-4  
Fourth Quarter 2008  
Michigan Plaza  
3801-3823 West Michigan Avenue  
Indianapolis, Indiana

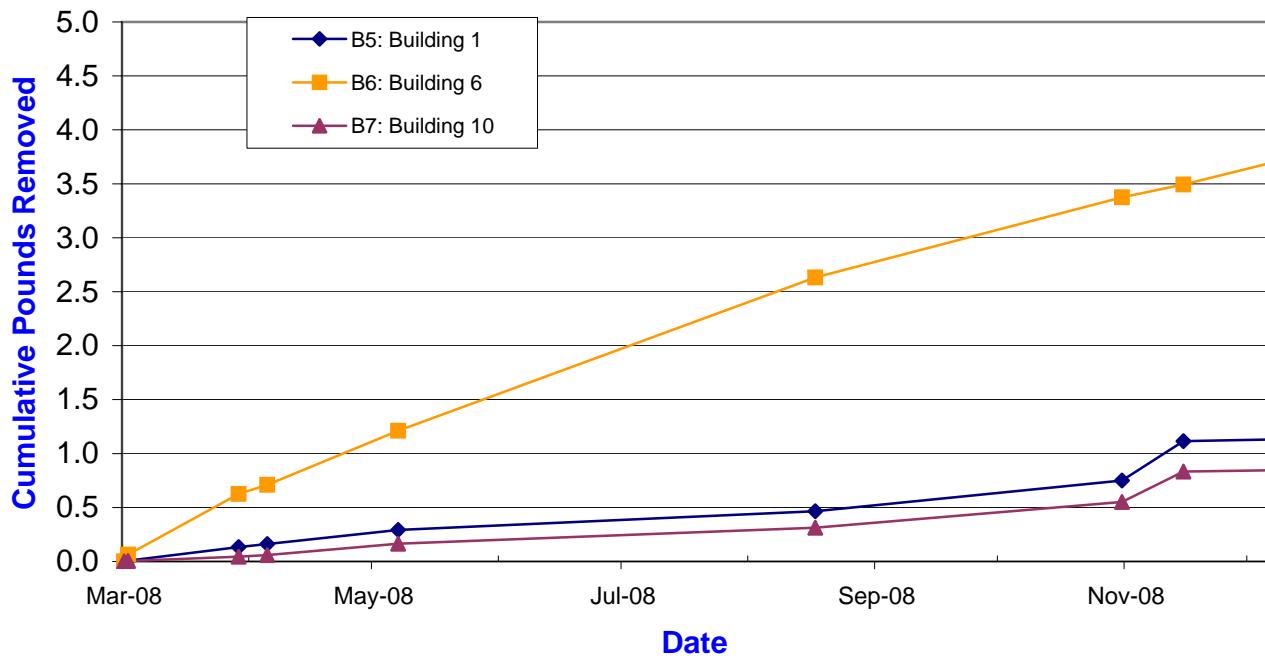
**FIGURE**

**15**

### PCE Concentrations Trend - Apartment Vapor Mitigation Systems (B5-B7)



### PCE Pounds Removed - Apartment Vapor Mitigation Systems (B5-B7)



## **APPENDIX A**

### **LAB ANALYTICAL RESULTS**

**Air Results – December 11, 2008**

**Soil Results – December 30, 2008**

**Soil and Groundwater Results – December 13, 2008**

**Groundwater Results – December 9, 2008**

**Groundwater Results – December 9, 2008**

December 09, 2008

Leena Lothe  
Mundell & Associates, Inc.  
110 South Downey Avenue  
Indianapolis, IN 46219

RE: Project: Michigan Meadows Apts.  
Pace Project No.: 5021050

Dear Leena Lothe:

Enclosed are the analytical results for sample(s) received by the laboratory on November 20, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Phaedra Zucksworth*

Phaedra Zucksworth

phaedra.zucksworth@pacelabs.com  
Project Manager

Illinois/NELAC Certification Number: 100418  
Indiana Certification Number: C-49-06  
Kansas Certification Number: E-10247  
Kentucky Certification Number: 0042  
Ohio VAP: CL0065  
Pennsylvania: 68-00791  
West Virginia Certification Number: 330

Enclosures

#### REPORT OF LABORATORY ANALYSIS

Page 1 of 32

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## SAMPLE SUMMARY

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Lab ID	Sample ID	Matrix	Date Collected	Date Received
5021050001	MMW-P-01	Water	11/19/08 12:45	11/20/08 13:00
5021050002	MMW-P-02	Water	11/19/08 09:35	11/20/08 13:00
5021050003	MMW-P-03S	Water	11/19/08 10:00	11/20/08 13:00
5021050004	MMW-P-03D	Water	11/19/08 09:45	11/20/08 13:00
5021050005	MMW-P-04	Water	11/18/08 12:45	11/20/08 13:00
5021050006	MMW-P-05	Water	11/19/08 11:15	11/20/08 13:00
5021050007	MMW-P-06	Water	11/19/08 11:30	11/20/08 13:00
5021050008	MMW-P-07	Water	11/19/08 13:00	11/20/08 13:00
5021050009	MMW-P-08	Water	11/19/08 13:15	11/20/08 13:00
5021050010	MMW-P-09S	Water	11/19/08 15:15	11/20/08 13:00
5021050011	MMW-P-09D	Water	11/19/08 15:30	11/20/08 13:00
5021050012	MMW-P-10S	Water	11/19/08 14:30	11/20/08 13:00
5021050013	MMW-P-10D	Water	11/19/08 14:15	11/20/08 13:00
5021050014	DUP	Water	11/19/08 08:00	11/20/08 13:00
5021050015	TB	Water	11/19/08 08:00	11/20/08 13:00
5021050016	DUP 2	Water	11/19/08 08:00	11/20/08 13:00

## REPORT OF LABORATORY ANALYSIS

Page 2 of 32

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## SAMPLE ANALYTE COUNT

Project: Michigan Meadows Apts.  
Pace Project No.: 5021050

Lab ID	Sample ID	Method	Analysts	Analytes Reported
5021050001	MMW-P-01	EPA 8260	HEB	20
5021050002	MMW-P-02	EPA 8260	HEB	20
5021050003	MMW-P-03S	ASTM D516-90,02 EPA 353.2 EPA 8260 SM 2340B	TPD CLS HEB FRW	1 1 20 1
5021050004	MMW-P-03D	ASTM D516-90,02 EPA 353.2 EPA 8260	TPD CLS HEB	1 1 20
5021050005	MMW-P-04	EPA 8260	HEB	20
5021050006	MMW-P-05	EPA 8260	HEB	20
5021050007	MMW-P-06	ASTM D516-90,02 EPA 353.2 EPA 8260	TPD CLS HEB	1 1 19
5021050008	MMW-P-07	EPA 8260	HEB	20
5021050009	MMW-P-08	ASTM D516-90,02 EPA 353.2 EPA 8260 SM 2340B	TPD CLS HEB FRW	1 1 20 1
5021050010	MMW-P-09S	ASTM D516-90,02 EPA 353.2 EPA 8260	TPD CLS HEB	1 1 20
5021050011	MMW-P-09D	EPA 8260	HEB	20
5021050012	MMW-P-10S	ASTM D516-90,02 EPA 353.2 EPA 8260	TPD CLS HEB	1 1 20
5021050013	MMW-P-10D	EPA 8260	HEB	20
5021050014	DUP	EPA 8260	HEB	20
5021050015	TB	EPA 8260	HEB	20
5021050016	DUP 2	EPA 8260	SLB	20

## REPORT OF LABORATORY ANALYSIS

Page 3 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-01	Lab ID: 5021050001	Collected: 11/19/08 12:45	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/04/08 16:46	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/04/08 16:46	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/04/08 16:46	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/04/08 16:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/04/08 16:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/04/08 16:46	75-35-4	
cis-1,2-Dichloroethene	<b>4320</b>	ug/L	125	25		12/04/08 22:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/04/08 16:46	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/04/08 16:46	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/04/08 16:46	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/04/08 16:46	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/04/08 16:46	127-18-4	
Toluene	ND	ug/L	5.0	1		12/04/08 16:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/04/08 16:46	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/04/08 16:46	79-01-6	
Vinyl chloride	<b>116</b>	ug/L	2.0	1		12/04/08 16:46	75-01-4	H1
Xylene (Total)	ND	ug/L	10.0	1		12/04/08 16:46	1330-20-7	
Dibromofluoromethane (S)	97 %		80-123	1		12/04/08 16:46	1868-53-7	
4-Bromofluorobenzene (S)	99 %		70-126	1		12/04/08 16:46	460-00-4	
Toluene-d8 (S)	103 %		80-116	1		12/04/08 16:46	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 4 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-02	Lab ID: 5021050002	Collected: 11/19/08 09:35	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/01/08 10:37	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/01/08 10:37	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/01/08 10:37	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/01/08 10:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/01/08 10:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/01/08 10:37	75-35-4	
cis-1,2-Dichloroethene	<b>75.4</b>	ug/L	5.0	1		12/01/08 10:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 10:37	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/01/08 10:37	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/01/08 10:37	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/01/08 10:37	91-20-3	
Tetrachloroethene	<b>10.7</b>	ug/L	5.0	1		12/01/08 10:37	127-18-4	
Toluene	ND	ug/L	5.0	1		12/01/08 10:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/01/08 10:37	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/01/08 10:37	79-01-6	
Vinyl chloride	<b>69.5</b>	ug/L	2.0	1		12/01/08 10:37	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/01/08 10:37	1330-20-7	
Dibromofluoromethane (S)	107 %		80-123	1		12/01/08 10:37	1868-53-7	
4-Bromofluorobenzene (S)	92 %		70-126	1		12/01/08 10:37	460-00-4	
Toluene-d8 (S)	104 %		80-116	1		12/01/08 10:37	2037-26-5	

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Page 5 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-03S	Lab ID: 5021050003	Collected: 11/19/08 10:00	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2340B Hardness, Total (Calc.)</b>	Analytical Method: SM 2340B							
Total Hardness	<b>520</b>	mg/L	1.0	1		12/09/08 14:01		
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/03/08 15:07	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/03/08 15:07	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/03/08 15:07	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/03/08 15:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/03/08 15:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/03/08 15:07	75-35-4	
cis-1,2-Dichloroethene	<b>494</b>	ug/L	50.0	10		12/03/08 15:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/03/08 15:07	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/03/08 15:07	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/03/08 15:07	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/03/08 15:07	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/03/08 15:07	127-18-4	
Toluene	ND	ug/L	5.0	1		12/03/08 15:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/03/08 15:07	71-55-6	
Trichloroethene	<b>6.0</b>	ug/L	5.0	1		12/03/08 15:07	79-01-6	
Vinyl chloride	<b>40.8</b>	ug/L	2.0	1		12/03/08 15:07	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/03/08 15:07	1330-20-7	
Dibromofluoromethane (S)	99 %		80-123	1		12/03/08 15:07	1868-53-7	
4-Bromofluorobenzene (S)	99 %		70-126	1		12/03/08 15:07	460-00-4	
Toluene-d8 (S)	102 %		80-116	1		12/03/08 15:07	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/20/08 18:36		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	<b>43.8</b>	mg/L	12.5	2.5		11/24/08 10:19	14808-79-8	

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## REPORT OF LABORATORY ANALYSIS

Page 6 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-03D	Lab ID: 5021050004	Collected: 11/19/08 09:45	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/01/08 11:45	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/01/08 11:45	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/01/08 11:45	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/01/08 11:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/01/08 11:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/01/08 11:45	75-35-4	
cis-1,2-Dichloroethene	<b>80.6</b>	ug/L	5.0	1		12/01/08 11:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 11:45	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/01/08 11:45	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/01/08 11:45	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/01/08 11:45	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/01/08 11:45	127-18-4	
Toluene	ND	ug/L	5.0	1		12/01/08 11:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/01/08 11:45	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/01/08 11:45	79-01-6	
Vinyl chloride	<b>36.9</b>	ug/L	2.0	1		12/01/08 11:45	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/01/08 11:45	1330-20-7	
Dibromofluoromethane (S)	110 %		80-123	1		12/01/08 11:45	1868-53-7	
4-Bromofluorobenzene (S)	93 %		70-126	1		12/01/08 11:45	460-00-4	
Toluene-d8 (S)	106 %		80-116	1		12/01/08 11:45	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/20/08 18:37		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	ND	mg/L	5.0	1		11/24/08 10:19	14808-79-8	

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Page 7 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-04	Lab ID: 5021050005	Collected: 11/18/08 12:45	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/03/08 16:15	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/03/08 16:15	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/03/08 16:15	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/03/08 16:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/03/08 16:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/03/08 16:15	75-35-4	
cis-1,2-Dichloroethene	<b>248</b>	ug/L	5.0	1		12/03/08 16:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/03/08 16:15	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/03/08 16:15	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/03/08 16:15	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/03/08 16:15	91-20-3	
Tetrachloroethene	<b>45.0</b>	ug/L	5.0	1		12/03/08 16:15	127-18-4	
Toluene	ND	ug/L	5.0	1		12/03/08 16:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/03/08 16:15	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/03/08 16:15	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		12/03/08 16:15	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/03/08 16:15	1330-20-7	
Dibromofluoromethane (S)	99 %		80-123	1		12/03/08 16:15	1868-53-7	
4-Bromofluorobenzene (S)	105 %		70-126	1		12/03/08 16:15	460-00-4	
Toluene-d8 (S)	105 %		80-116	1		12/03/08 16:15	2037-26-5	

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Page 8 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-05	Lab ID: 5021050006	Collected: 11/19/08 11:15	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/01/08 12:52	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/01/08 12:52	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/01/08 12:52	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/01/08 12:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/01/08 12:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/01/08 12:52	75-35-4	
cis-1,2-Dichloroethene	<b>22.1</b>	ug/L	5.0	1		12/01/08 12:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 12:52	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/01/08 12:52	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/01/08 12:52	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/01/08 12:52	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/01/08 12:52	127-18-4	
Toluene	ND	ug/L	5.0	1		12/01/08 12:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/01/08 12:52	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/01/08 12:52	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		12/01/08 12:52	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/01/08 12:52	1330-20-7	
Dibromofluoromethane (S)	110 %		80-123	1		12/01/08 12:52	1868-53-7	
4-Bromofluorobenzene (S)	96 %		70-126	1		12/01/08 12:52	460-00-4	
Toluene-d8 (S)	105 %		80-116	1		12/01/08 12:52	2037-26-5	

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Page 9 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-06	Lab ID: 5021050007	Collected: 11/19/08 11:30	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Vinyl chloride	<b>61.4</b> ug/L		2.0	1		12/01/08 23:01	75-01-4	
Methylene chloride	ND ug/L		5.0	1		12/01/08 23:01	75-09-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/01/08 23:01	75-35-4	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/01/08 23:01	156-60-5	
1,1-Dichloroethane	ND ug/L		5.0	1		12/01/08 23:01	75-34-3	
Chloroform	ND ug/L		5.0	1		12/01/08 23:01	67-66-3	
1,1,1-Trichloroethane	ND ug/L		5.0	1		12/01/08 23:01	71-55-6	
Carbon tetrachloride	ND ug/L		5.0	1		12/01/08 23:01	56-23-5	
Benzene	ND ug/L		5.0	1		12/01/08 23:01	71-43-2	
1,2-Dichloroethane	ND ug/L		5.0	1		12/01/08 23:01	107-06-2	
Trichloroethene	ND ug/L		5.0	1		12/01/08 23:01	79-01-6	
Toluene	ND ug/L		5.0	1		12/01/08 23:01	108-88-3	
Tetrachloroethene	ND ug/L		5.0	1		12/01/08 23:01	127-18-4	
Ethylbenzene	ND ug/L		5.0	1		12/01/08 23:01	100-41-4	
Xylene (Total)	ND ug/L		10.0	1		12/01/08 23:01	1330-20-7	
Naphthalene	ND ug/L		5.0	1		12/01/08 23:01	91-20-3	
Dibromofluoromethane (S)	117 %		80-123	1		12/01/08 23:01	1868-53-7	
4-Bromofluorobenzene (S)	92 %		70-126	1		12/01/08 23:01	460-00-4	
Toluene-d8 (S)	103 %		80-116	1		12/01/08 23:01	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND mg/L		0.10	1		11/20/08 18:38		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	<b>130</b> mg/L		50.0	10		11/24/08 10:19	14808-79-8	

Date: 12/09/2008 03:28 PM

## REPORT OF LABORATORY ANALYSIS

Page 10 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-07	Lab ID: 5021050008	Collected: 11/19/08 13:00	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/03/08 17:22	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/03/08 17:22	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/03/08 17:22	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/03/08 17:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/03/08 17:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/03/08 17:22	75-35-4	
cis-1,2-Dichloroethene	797	ug/L	50.0	10		12/01/08 14:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/03/08 17:22	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/03/08 17:22	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/03/08 17:22	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/03/08 17:22	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/03/08 17:22	127-18-4	
Toluene	ND	ug/L	5.0	1		12/03/08 17:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/03/08 17:22	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/03/08 17:22	79-01-6	
Vinyl chloride	749	ug/L	20.0	10		12/01/08 14:34	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/03/08 17:22	1330-20-7	
Dibromofluoromethane (S)	99 %		80-123	1		12/03/08 17:22	1868-53-7	
4-Bromofluorobenzene (S)	101 %		70-126	1		12/03/08 17:22	460-00-4	
Toluene-d8 (S)	104 %		80-116	1		12/03/08 17:22	2037-26-5	

Date: 12/09/2008 03:28 PM

## REPORT OF LABORATORY ANALYSIS

Page 11 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-08	Lab ID: 5021050009	Collected: 11/19/08 13:15	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2340B Hardness, Total (Calc.)</b>	Analytical Method: SM 2340B							
Total Hardness	<b>656</b> mg/L		1.0	1		12/09/08 14:07		
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		50.0	10		12/01/08 15:08	71-43-2	
Carbon tetrachloride	ND ug/L		50.0	10		12/01/08 15:08	56-23-5	
Chloroform	ND ug/L		50.0	10		12/01/08 15:08	67-66-3	
1,1-Dichloroethane	ND ug/L		50.0	10		12/01/08 15:08	75-34-3	
1,2-Dichloroethane	ND ug/L		50.0	10		12/01/08 15:08	107-06-2	
1,1-Dichloroethene	ND ug/L		50.0	10		12/01/08 15:08	75-35-4	
cis-1,2-Dichloroethene	<b>5690</b> ug/L		500	100		12/01/08 15:42	156-59-2	
trans-1,2-Dichloroethene	<b>91.4</b> ug/L		50.0	10		12/01/08 15:08	156-60-5	
Ethylbenzene	ND ug/L		50.0	10		12/01/08 15:08	100-41-4	
Methylene chloride	ND ug/L		50.0	10		12/01/08 15:08	75-09-2	
Naphthalene	ND ug/L		50.0	10		12/01/08 15:08	91-20-3	
Tetrachloroethene	ND ug/L		50.0	10		12/01/08 15:08	127-18-4	
Toluene	ND ug/L		50.0	10		12/01/08 15:08	108-88-3	
1,1,1-Trichloroethane	ND ug/L		50.0	10		12/01/08 15:08	71-55-6	
Trichloroethene	ND ug/L		50.0	10		12/01/08 15:08	79-01-6	
Vinyl chloride	<b>13000</b> ug/L		200	100		12/01/08 15:42	75-01-4	
Xylene (Total)	ND ug/L		100	10		12/01/08 15:08	1330-20-7	
Dibromofluoromethane (S)	112 %		80-123	10		12/01/08 15:08	1868-53-7	
4-Bromofluorobenzene (S)	91 %		70-126	10		12/01/08 15:08	460-00-4	
Toluene-d8 (S)	102 %		80-116	10		12/01/08 15:08	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND mg/L		0.10	1		11/20/08 18:39		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	<b>7.2</b> mg/L		5.0	1		11/24/08 10:19	14808-79-8	

Date: 12/09/2008 03:28 PM

## REPORT OF LABORATORY ANALYSIS

Page 12 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-09S	Lab ID: 5021050010	Collected: 11/19/08 15:15	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/01/08 16:16	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/01/08 16:16	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/01/08 16:16	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/01/08 16:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/01/08 16:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/01/08 16:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 16:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 16:16	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/01/08 16:16	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/01/08 16:16	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/01/08 16:16	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/01/08 16:16	127-18-4	
Toluene	ND	ug/L	5.0	1		12/01/08 16:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/01/08 16:16	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/01/08 16:16	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		12/01/08 16:16	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/01/08 16:16	1330-20-7	
Dibromofluoromethane (S)	117 %		80-123	1		12/01/08 16:16	1868-53-7	
4-Bromofluorobenzene (S)	91 %		70-126	1		12/01/08 16:16	460-00-4	
Toluene-d8 (S)	104 %		80-116	1		12/01/08 16:16	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/20/08 18:40		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	133	mg/L		25.0	5		11/24/08 10:19	14808-79-8

Date: 12/09/2008 03:28 PM

## REPORT OF LABORATORY ANALYSIS

Page 13 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-09D	Lab ID: 5021050011	Collected: 11/19/08 15:30	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/01/08 16:50	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/01/08 16:50	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/01/08 16:50	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/01/08 16:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/01/08 16:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/01/08 16:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 16:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 16:50	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/01/08 16:50	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/01/08 16:50	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/01/08 16:50	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/01/08 16:50	127-18-4	
Toluene	ND	ug/L	5.0	1		12/01/08 16:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/01/08 16:50	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/01/08 16:50	79-01-6	
Vinyl chloride	<b>97.2</b>	ug/L	2.0	1		12/01/08 16:50	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/01/08 16:50	1330-20-7	
Dibromofluoromethane (S)	117 %		80-123	1		12/01/08 16:50	1868-53-7	
4-Bromofluorobenzene (S)	90 %		70-126	1		12/01/08 16:50	460-00-4	
Toluene-d8 (S)	103 %		80-116	1		12/01/08 16:50	2037-26-5	

Date: 12/09/2008 03:28 PM

## REPORT OF LABORATORY ANALYSIS

Page 14 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-10S	Lab ID: 5021050012	Collected: 11/19/08 14:30	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/03/08 17:56	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/03/08 17:56	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/03/08 17:56	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/03/08 17:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/03/08 17:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/03/08 17:56	75-35-4	
cis-1,2-Dichloroethene	<b>1510</b>	ug/L	50.0	10		12/03/08 18:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/03/08 17:56	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/03/08 17:56	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/03/08 17:56	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/03/08 17:56	91-20-3	
Tetrachloroethene	<b>78.6</b>	ug/L	5.0	1		12/03/08 17:56	127-18-4	
Toluene	ND	ug/L	5.0	1		12/03/08 17:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/03/08 17:56	71-55-6	
Trichloroethene	<b>28.0</b>	ug/L	5.0	1		12/03/08 17:56	79-01-6	
Vinyl chloride	<b>22.3</b>	ug/L	2.0	1		12/03/08 17:56	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/03/08 17:56	1330-20-7	
Dibromofluoromethane (S)	98 %		80-123	1		12/03/08 17:56	1868-53-7	
4-Bromofluorobenzene (S)	101 %		70-126	1		12/03/08 17:56	460-00-4	
Toluene-d8 (S)	104 %		80-116	1		12/03/08 17:56	2037-26-5	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/20/08 18:41		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	<b>34.4</b>	mg/L	5.0	1		11/24/08 10:19	14808-79-8	

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## REPORT OF LABORATORY ANALYSIS

Page 15 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: MMW-P-10D	Lab ID: 5021050013	Collected: 11/19/08 14:15	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/01/08 17:57	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/01/08 17:57	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/01/08 17:57	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/01/08 17:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/01/08 17:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/01/08 17:57	75-35-4	
cis-1,2-Dichloroethene	<b>3390</b>	ug/L	500	100		12/03/08 12:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 17:57	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/01/08 17:57	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/01/08 17:57	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/01/08 17:57	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/01/08 17:57	127-18-4	
Toluene	ND	ug/L	5.0	1		12/01/08 17:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/01/08 17:57	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/01/08 17:57	79-01-6	
Vinyl chloride	<b>5030</b>	ug/L	200	100		12/03/08 12:00	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/01/08 17:57	1330-20-7	
Dibromofluoromethane (S)	115 %		80-123	1		12/01/08 17:57	1868-53-7	
4-Bromofluorobenzene (S)	93 %		70-126	1		12/01/08 17:57	460-00-4	
Toluene-d8 (S)	103 %		80-116	1		12/01/08 17:57	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 16 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: DUP	Lab ID: 5021050014	Collected: 11/19/08 08:00	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/01/08 19:04	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/01/08 19:04	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/01/08 19:04	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/01/08 19:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/01/08 19:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/01/08 19:04	75-35-4	
cis-1,2-Dichloroethene	<b>4960</b>	ug/L	250	50		12/03/08 12:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 19:04	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/01/08 19:04	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/01/08 19:04	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/01/08 19:04	91-20-3	
Tetrachloroethene	<b>5.9</b>	ug/L	5.0	1		12/01/08 19:04	127-18-4	
Toluene	ND	ug/L	5.0	1		12/01/08 19:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/01/08 19:04	71-55-6	
Trichloroethene	<b>7.5</b>	ug/L	5.0	1		12/01/08 19:04	79-01-6	
Vinyl chloride	<b>168</b>	ug/L	2.0	1		12/01/08 19:04	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/01/08 19:04	1330-20-7	
Dibromofluoromethane (S)	113 %		80-123	1		12/01/08 19:04	1868-53-7	
4-Bromofluorobenzene (S)	92 %		70-126	1		12/01/08 19:04	460-00-4	
Toluene-d8 (S)	104 %		80-116	1		12/01/08 19:04	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 17 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: TB	Lab ID: 5021050015	Collected: 11/19/08 08:00	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	5.0	1		12/01/08 20:12	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/01/08 20:12	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/01/08 20:12	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/01/08 20:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/01/08 20:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/01/08 20:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 20:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/01/08 20:12	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/01/08 20:12	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/01/08 20:12	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/01/08 20:12	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/01/08 20:12	127-18-4	
Toluene	ND	ug/L	5.0	1		12/01/08 20:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/01/08 20:12	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/01/08 20:12	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		12/01/08 20:12	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/01/08 20:12	1330-20-7	
Dibromofluoromethane (S)	119 %		80-123	1		12/01/08 20:12	1868-53-7	
4-Bromofluorobenzene (S)	90 %		70-126	1		12/01/08 20:12	460-00-4	
Toluene-d8 (S)	104 %		80-116	1		12/01/08 20:12	2037-26-5	

Date: 12/09/2008 03:28 PM

## REPORT OF LABORATORY ANALYSIS

Page 18 of 32

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## ANALYTICAL RESULTS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

Sample: DUP 2	Lab ID: 5021050016	Collected: 11/19/08 08:00	Received: 11/20/08 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/03/08 10:18	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/03/08 10:18	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/03/08 10:18	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/03/08 10:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/03/08 10:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/03/08 10:18	75-35-4	
cis-1,2-Dichloroethene	<b>4270</b>	ug/L	125	25		12/03/08 10:49	156-59-2	
trans-1,2-Dichloroethene	<b>120</b>	ug/L	5.0	1		12/03/08 10:18	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/03/08 10:18	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/03/08 10:18	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/03/08 10:18	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		12/03/08 10:18	127-18-4	
Toluene	ND	ug/L	5.0	1		12/03/08 10:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/03/08 10:18	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		12/03/08 10:18	79-01-6	
Vinyl chloride	<b>11900</b>	ug/L	200	100		12/03/08 15:21	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/03/08 10:18	1330-20-7	
Dibromofluoromethane (S)	109 %		80-123	1		12/03/08 10:18	1868-53-7	
4-Bromofluorobenzene (S)	96 %		70-126	1		12/03/08 10:18	460-00-4	
Toluene-d8 (S)	100 %		80-116	1		12/03/08 10:18	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 19 of 32

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## QUALITY CONTROL DATA

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

QC Batch: WETA/3053 Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.

Associated Lab Samples: 5021050003, 5021050004, 5021050007, 5021050009, 5021050010, 5021050012

METHOD BLANK: 237177 Matrix: Water

Associated Lab Samples: 5021050003, 5021050004, 5021050007, 5021050009, 5021050010, 5021050012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	11/20/08 18:18	

LABORATORY CONTROL SAMPLE: 237178

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.92	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 237179 237180

Parameter	Units	5021037003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	0.90	0.91	90	91	90-110	1	20	

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## REPORT OF LABORATORY ANALYSIS

Page 20 of 32

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## **QUALITY CONTROL DATA**

Project: Michigan Meadows Apts.  
Pace Project No.: 5021050

QC Batch: WETA/3064 Analysis Method: ASTM D516-90,02  
QC Batch Method: ASTM D516-90,02 Analysis Description: ASTM D516-9002 Sulfate Water  
Associated Lab Samples: 5021050003, 5021050004, 5021050007, 5021050009, 5021050010, 5021050012

METHOD BLANK: 238232 Matrix: Water

Associated Lab Samples: 5021050003, 5021050004, 5021050007, 5021050009, 5021050010, 5021050012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	5.0	11/24/08 10:19	

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LABORATORY CONTROL SAMPLE: 238233

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 238235 238236

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		5021058002	Spike Conc.	Spike Conc.	MS Result								
Sulfate	mg/L	ND	20	20	22.9	23.0	95	96	75-125	0	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 238237 238238

Parameter	Units	MS		MSD		MS Result	% Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike	Conc.	Spike	Conc.							
Sulfate	mg/L	130	200	200	352	333	111	101	75-125	6	20	

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SAMPLE DUPLICATE: 238234

Parameter	Units	5021058002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/l	ND	3.81		20	

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## **REPORT OF LABORATORY ANALYSIS**

Page 21 of 32

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## **QUALITY CONTROL DATA**

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

QC Batch: MSV/13085

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV

Associated Lab Samples: 5021050002, 5021050004, 5021050006, 5021050008, 5021050009, 5021050010, 5021050011, 5021050013, 5021050014, 5021050015

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METHOD BLANK: 240180

## Matrix: Water

Associated Lab Samples: 5021050002, 5021050004, 5021050006, 5021050008, 5021050009, 5021050010, 5021050011, 5021050013, 5021050014, 5021050015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	12/01/08 10:03	
1,1-Dichloroethane	ug/L	ND	5.0	12/01/08 10:03	
1,1-Dichloroethene	ug/L	ND	5.0	12/01/08 10:03	
1,2-Dichloroethane	ug/L	ND	5.0	12/01/08 10:03	
Benzene	ug/L	ND	5.0	12/01/08 10:03	
Carbon tetrachloride	ug/L	ND	5.0	12/01/08 10:03	
Chloroform	ug/L	ND	5.0	12/01/08 10:03	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/01/08 10:03	
Ethylbenzene	ug/L	ND	5.0	12/01/08 10:03	
Methylene chloride	ug/L	ND	5.0	12/01/08 10:03	
Naphthalene	ug/L	ND	5.0	12/01/08 10:03	
Tetrachloroethene	ug/L	ND	5.0	12/01/08 10:03	
Toluene	ug/L	ND	5.0	12/01/08 10:03	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/01/08 10:03	
Trichloroethene	ug/L	ND	5.0	12/01/08 10:03	
Vinyl chloride	ug/L	ND	2.0	12/01/08 10:03	
Xylene (Total)	ug/L	ND	10.0	12/01/08 10:03	
4-Bromofluorobenzene (S)	%	91	70-126	12/01/08 10:03	
Dibromofluoromethane (S)	%	108	80-123	12/01/08 10:03	
Toluene-d8 (S)	%	105	80-116	12/01/08 10:03	

LABORATORY CONTROL SAMPLE: 240181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	54.0	108	69-136	
1,1-Dichloroethane	ug/L	50	47.5	95	67-133	
1,1-Dichloroethene	ug/L	50	50.6	101	63-128	
1,2-Dichloroethane	ug/L	50	53.6	107	69-139	
Benzene	ug/L	50	52.5	105	78-127	
Carbon tetrachloride	ug/L	50	55.6	111	62-143	
Chloroform	ug/L	50	48.1	96	74-131	
cis-1,2-Dichloroethene	ug/L	50	52.1	104	74-128	
Ethylbenzene	ug/L	50	57.2	114	81-126	
Methylene chloride	ug/L	50	49.0	98	32-164	
Naphthalene	ug/L	50	46.3	93	61-135	
Tetrachloroethene	ug/L	50	54.4	109	60-119	
Toluene	ug/L	50	55.4	111	75-129	
trans-1,2-Dichloroethene	ug/L	50	56.0	112	71-126	
Trichloroethene	ug/L	50	53.8	108	74-130	
Vinyl chloride	ug/L	50	54.1	108	55-141	

Date: 12/09/2008 03:28 PM

## **REPORT OF LABORATORY ANALYSIS**

Page 22 of 32

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## QUALITY CONTROL DATA

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

LABORATORY CONTROL SAMPLE: 240181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	175	117	76-132	
4-Bromofluorobenzene (S)	%			99	70-126	
Dibromofluoromethane (S)	%			92	80-123	
Toluene-d8 (S)	%			103	80-116	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 240182 240183

Parameter	Units	MS 5021050006		MSD		MS Result	% Rec	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
		Spike Conc.	Conc.	Spike Conc.	Result							
1,1,1-Trichloroethane	ug/L	ND	50	50	20.6	47.8	41	96	64-143	80	20	
1,1-Dichloroethane	ug/L	ND	50	50	20.0	43.2	40	86	68-139	74	20	
1,1-Dichloroethene	ug/L	ND	50	50	21.5	46.0	43	92	55-140	73	20	
1,2-Dichloroethane	ug/L	ND	50	50	19.1	47.4	38	95	63-148	85	20	
Benzene	ug/L	ND	50	50	19.7	46.9	39	94	63-141	82	20	
Carbon tetrachloride	ug/L	ND	50	50	21.3	49.8	43	100	54-145	80	20	
Chloroform	ug/L	ND	50	50	19.6	43.0	39	86	67-134	75	20	
cis-1,2-Dichloroethene	ug/L	22.1	50	50	41.6	67.7	39	91	65-132	48	20	
Ethylbenzene	ug/L	ND	50	50	20.6	48.3	41	97	44-151	80	20	
Methylene chloride	ug/L	ND	50	50	16.7	44.0	33	88	46-154	90	20	
Naphthalene	ug/L	ND	50	50	16.5	35.6	33	71	44-138	73	20	
Tetrachloroethene	ug/L	ND	50	50	20.9	47.1	42	94	25-146	77	20	
Toluene	ug/L	ND	50	50	22.8	51.6	40	98	59-142	78	20	
trans-1,2-Dichloroethene	ug/L	ND	50	50	25.9	54.1	52	108	60-137	71	20	
Trichloroethene	ug/L	ND	50	50	19.8	46.8	40	94	61-137	81	20	
Vinyl chloride	ug/L	ND	50	50	21.3	47.3	43	95	51-144	76	20	1d,2d
Xylene (Total)	ug/L	ND	150	150	61.2	148	41	98	44-152	83	20	
4-Bromofluorobenzene (S)	%						99	102	70-126		20	
Dibromofluoromethane (S)	%						101	95	80-123		20	
Toluene-d8 (S)	%						102	102	80-116		20	

## **QUALITY CONTROL DATA**

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

QC Batch: MSV/13086

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV

Associated Lab Samples: 5021050007

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METHOD BLANK: 240184

## Matrix: Water

Associated Lab Samples: 5021050007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	12/01/08 22:27	
1,1-Dichloroethane	ug/L	ND	5.0	12/01/08 22:27	
1,1-Dichloroethene	ug/L	ND	5.0	12/01/08 22:27	
1,2-Dichloroethane	ug/L	ND	5.0	12/01/08 22:27	
Benzene	ug/L	ND	5.0	12/01/08 22:27	
Carbon tetrachloride	ug/L	ND	5.0	12/01/08 22:27	
Chloroform	ug/L	ND	5.0	12/01/08 22:27	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/01/08 22:27	
Ethylbenzene	ug/L	ND	5.0	12/01/08 22:27	
Methylene chloride	ug/L	ND	5.0	12/01/08 22:27	
Naphthalene	ug/L	ND	5.0	12/01/08 22:27	
Tetrachloroethene	ug/L	ND	5.0	12/01/08 22:27	
Toluene	ug/L	ND	5.0	12/01/08 22:27	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/01/08 22:27	
Trichloroethene	ug/L	ND	5.0	12/01/08 22:27	
Vinyl chloride	ug/L	ND	2.0	12/01/08 22:27	
Xylene (Total)	ug/L	ND	10.0	12/01/08 22:27	
4-Bromofluorobenzene (S)	%	91	70-126	12/01/08 22:27	
Dibromofluoromethane (S)	%	118	80-123	12/01/08 22:27	
Toluene-d8 (S)	%	104	80-116	12/01/08 22:27	

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LABORATORY CONTROL SAMPLE: 240185

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	55.7	111	69-136	
1,1-Dichloroethane	ug/L	50	49.4	99	67-133	
1,1-Dichloroethene	ug/L	50	53.1	106	63-128	
1,2-Dichloroethane	ug/L	50	51.6	103	69-139	
Benzene	ug/L	50	54.4	109	78-127	
Carbon tetrachloride	ug/L	50	57.5	115	62-143	
Chloroform	ug/L	50	49.9	100	74-131	
cis-1,2-Dichloroethene	ug/L	50	56.7	113	74-128	
Ethylbenzene	ug/L	50	58.4	117	81-126	
Methylene chloride	ug/L	50	53.2	106	32-164	
Naphthalene	ug/L	50	45.4	91	61-135	
Tetrachloroethene	ug/L	50	56.1	112	60-119	
Toluene	ug/L	50	57.0	114	75-129	
trans-1,2-Dichloroethene	ug/L	50	59.4	119	71-126	
Trichloroethene	ug/L	50	58.2	116	74-130	
Vinyl chloride	ug/L	50	56.1	112	55-141	
Xylene (Total)	ug/L	150	182	122	76-132	

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## **REPORT OF LABORATORY ANALYSIS**

Page 24 of 32

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## QUALITY CONTROL DATA

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

LABORATORY CONTROL SAMPLE: 240185

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			100	70-126	
Dibromofluoromethane (S)	%			94	80-123	
Toluene-d8 (S)	%			101	80-116	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 240186 240187

Parameter	Units	5021050007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	26.6	47.9	53	96	64-143	57	20	
1,1-Dichloroethane	ug/L	ND	50	50	26.3	44.8	53	90	68-139	52	20	
1,1-Dichloroethene	ug/L	ND	50	50	29.2	47.8	57	94	55-140	48	20	
1,2-Dichloroethane	ug/L	ND	50	50	25.7	47.3	51	95	63-148	59	20	
Benzene	ug/L	ND	50	50	24.7	46.8	49	94	63-141	62	20	
Carbon tetrachloride	ug/L	ND	50	50	27.2	48.2	54	96	54-145	56	20	
Chloroform	ug/L	ND	50	50	25.2	44.2	50	88	67-134	55	20	
Ethylbenzene	ug/L	ND	50	50	25.8	48.3	52	97	44-151	61	20	
Methylene chloride	ug/L	ND	50	50	24.1	45.4	48	91	46-154	61	20	
Naphthalene	ug/L	ND	50	50	17.7	32.5	35	65	44-138	59	20	
Tetrachloroethene	ug/L	ND	50	50	23.9	43.2	48	86	25-146	57	20	
Toluene	ug/L	ND	50	50	25.8	70.8	51	141	59-142	93	20	
trans-1,2-Dichloroethene	ug/L	ND	50	50	78.7	93.7	157	187	60-137	17	20	
Trichloroethene	ug/L	ND	50	50	25.0	47.2	50	94	61-137	62	20	
Vinyl chloride	ug/L	61.4	50	50	81.4	95.2	40	68	51-144	16	20	
Xylene (Total)	ug/L	ND	150	150	80.3	147	54	98	44-152	59	20	
4-Bromofluorobenzene (S)	%						102	101	70-126		20	
Dibromofluoromethane (S)	%						104	97	80-123		20	
Toluene-d8 (S)	%						100	100	80-116		20	

## QUALITY CONTROL DATA

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

QC Batch:	MSV/13125	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	5021050016		

METHOD BLANK: 240862                                  Matrix: Water

Associated Lab Samples: 5021050016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	12/03/08 09:48	
1,1-Dichloroethane	ug/L	ND	5.0	12/03/08 09:48	
1,1-Dichloroethene	ug/L	ND	5.0	12/03/08 09:48	
1,2-Dichloroethane	ug/L	ND	5.0	12/03/08 09:48	
Benzene	ug/L	ND	5.0	12/03/08 09:48	
Carbon tetrachloride	ug/L	ND	5.0	12/03/08 09:48	
Chloroform	ug/L	ND	5.0	12/03/08 09:48	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/03/08 09:48	
Ethylbenzene	ug/L	ND	5.0	12/03/08 09:48	
Methylene chloride	ug/L	ND	5.0	12/03/08 09:48	
Naphthalene	ug/L	ND	5.0	12/03/08 09:48	
Tetrachloroethene	ug/L	ND	5.0	12/03/08 09:48	
Toluene	ug/L	ND	5.0	12/03/08 09:48	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/03/08 09:48	
Trichloroethene	ug/L	ND	5.0	12/03/08 09:48	
Vinyl chloride	ug/L	ND	2.0	12/03/08 09:48	
Xylene (Total)	ug/L	ND	10.0	12/03/08 09:48	
4-Bromofluorobenzene (S)	%	100	70-126	12/03/08 09:48	
Dibromofluoromethane (S)	%	103	80-123	12/03/08 09:48	
Toluene-d8 (S)	%	100	80-116	12/03/08 09:48	

LABORATORY CONTROL SAMPLE: 240863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	45.9	92	69-136	
1,1-Dichloroethane	ug/L	50	46.0	92	67-133	
1,1-Dichloroethene	ug/L	50	51.6	103	63-128	
1,2-Dichloroethane	ug/L	50	51.2	102	69-139	
Benzene	ug/L	50	47.1	94	78-127	
Carbon tetrachloride	ug/L	50	42.1	84	62-143	
Chloroform	ug/L	50	49.4	99	74-131	
cis-1,2-Dichloroethene	ug/L	50	48.1	96	74-128	
Ethylbenzene	ug/L	50	46.2	92	81-126	
Methylene chloride	ug/L	50	57.4	115	32-164	
Naphthalene	ug/L	50	44.6	89	61-135	
Tetrachloroethene	ug/L	50	47.4	95	60-119	
Toluene	ug/L	50	45.8	92	75-129	
trans-1,2-Dichloroethene	ug/L	50	48.8	98	71-126	
Trichloroethene	ug/L	50	48.4	97	74-130	
Vinyl chloride	ug/L	50	49.9	100	55-141	
Xylene (Total)	ug/L	150	139	93	76-132	

Date: 12/09/2008 03:28 PM

## REPORT OF LABORATORY ANALYSIS

Page 26 of 32

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## QUALITY CONTROL DATA

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

LABORATORY CONTROL SAMPLE: 240863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			100	70-126	
Dibromofluoromethane (S)	%			104	80-123	
Toluene-d8 (S)	%			100	80-116	

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## REPORT OF LABORATORY ANALYSIS

Page 27 of 32

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## **QUALITY CONTROL DATA**

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

QC Batch: MSV/13147 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Associated Lab Samples: 5021050003, 5021050005, 5021050012

METHOD BLANK: 241098 Matrix: Water

Associated Lab Samples: 5021050003, 5021050005, 5021050012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	12/03/08 09:28	
1,1-Dichloroethane	ug/L	ND	5.0	12/03/08 09:28	
1,1-Dichloroethene	ug/L	ND	5.0	12/03/08 09:28	
1,2-Dichloroethane	ug/L	ND	5.0	12/03/08 09:28	
Benzene	ug/L	ND	5.0	12/03/08 09:28	
Carbon tetrachloride	ug/L	ND	5.0	12/03/08 09:28	
Chloroform	ug/L	ND	5.0	12/03/08 09:28	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/03/08 09:28	
Ethylbenzene	ug/L	ND	5.0	12/03/08 09:28	
Methylene chloride	ug/L	ND	5.0	12/03/08 09:28	
Naphthalene	ug/L	ND	5.0	12/03/08 09:28	
Tetrachloroethene	ug/L	ND	5.0	12/03/08 09:28	
Toluene	ug/L	ND	5.0	12/03/08 09:28	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/03/08 09:28	
Trichloroethene	ug/L	ND	5.0	12/03/08 09:28	
Vinyl chloride	ug/L	ND	2.0	12/03/08 09:28	
Xylene (Total)	ug/L	ND	10.0	12/03/08 09:28	
4-Bromofluorobenzene (S)	%	97	70-126	12/03/08 09:28	
Dibromofluoromethane (S)	%	102	80-123	12/03/08 09:28	
Toluene-d8 (S)	%	103	80-116	12/03/08 09:28	

LABORATORY CONTROL SAMPLE: 241099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	57.2	114	69-136	
1,1-Dichloroethane	ug/L	50	49.0	98	67-133	
1,1-Dichloroethene	ug/L	50	56.4	113	63-128	
1,2-Dichloroethane	ug/L	50	59.5	119	69-139	
Benzene	ug/L	50	50.2	100	78-127	
Carbon tetrachloride	ug/L	50	55.2	110	62-143	
Chloroform	ug/L	50	53.0	106	74-131	
cis-1,2-Dichloroethene	ug/L	50	51.2	102	74-128	
Ethylbenzene	ug/L	50	50.8	102	81-126	
Methylene chloride	ug/L	50	54.4	109	32-164	
Naphthalene	ug/L	50	50.6	101	61-135	
Tetrachloroethene	ug/L	50	52.0	104	60-119	
Toluene	ug/L	50	55.0	110	75-129	
trans-1,2-Dichloroethene	ug/L	50	54.8	110	71-126	
Trichloroethene	ug/L	50	53.0	106	74-130	
Vinyl chloride	ug/L	50	51.2	102	55-141	
Xylene (Total)	ug/L	150	155	103	76-132	

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## **REPORT OF LABORATORY ANALYSIS**

Page 28 of 32

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## QUALITY CONTROL DATA

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

LABORATORY CONTROL SAMPLE: 241099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			98	70-126	
Dibromofluoromethane (S)	%			104	80-123	
Toluene-d8 (S)	%			101	80-116	

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## REPORT OF LABORATORY ANALYSIS

Page 29 of 32

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## QUALITY CONTROL DATA

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

QC Batch:	MSV/13177	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	5021050001		

METHOD BLANK: 241621                                  Matrix: Water

Associated Lab Samples: 5021050001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	12/04/08 12:13	
1,1-Dichloroethane	ug/L	ND	5.0	12/04/08 12:13	
1,1-Dichloroethene	ug/L	ND	5.0	12/04/08 12:13	
1,2-Dichloroethane	ug/L	ND	5.0	12/04/08 12:13	
Benzene	ug/L	ND	5.0	12/04/08 12:13	
Carbon tetrachloride	ug/L	ND	5.0	12/04/08 12:13	
Chloroform	ug/L	ND	5.0	12/04/08 12:13	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/04/08 12:13	
Ethylbenzene	ug/L	ND	5.0	12/04/08 12:13	
Methylene chloride	ug/L	ND	5.0	12/04/08 12:13	
Naphthalene	ug/L	ND	5.0	12/04/08 12:13	
Tetrachloroethene	ug/L	ND	5.0	12/04/08 12:13	
Toluene	ug/L	ND	5.0	12/04/08 12:13	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/04/08 12:13	
Trichloroethene	ug/L	ND	5.0	12/04/08 12:13	
Vinyl chloride	ug/L	ND	2.0	12/04/08 12:13	
Xylene (Total)	ug/L	ND	10.0	12/04/08 12:13	
4-Bromofluorobenzene (S)	%	99	70-126	12/04/08 12:13	
Dibromofluoromethane (S)	%	101	80-123	12/04/08 12:13	
Toluene-d8 (S)	%	102	80-116	12/04/08 12:13	

LABORATORY CONTROL SAMPLE: 241622

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	56.9	114	69-136	
1,1-Dichloroethane	ug/L	50	50.2	100	67-133	
1,1-Dichloroethene	ug/L	50	54.9	110	63-128	
1,2-Dichloroethane	ug/L	50	61.1	122	69-139	
Benzene	ug/L	50	52.0	104	78-127	
Carbon tetrachloride	ug/L	50	52.3	105	62-143	
Chloroform	ug/L	50	53.1	106	74-131	
cis-1,2-Dichloroethene	ug/L	50	51.9	104	74-128	
Ethylbenzene	ug/L	50	54.2	108	81-126	
Methylene chloride	ug/L	50	52.4	105	32-164	
Naphthalene	ug/L	50	62.1	124	61-135	
Tetrachloroethene	ug/L	50	54.1	108	60-119	
Toluene	ug/L	50	54.8	110	75-129	
trans-1,2-Dichloroethene	ug/L	50	54.8	110	71-126	
Trichloroethene	ug/L	50	54.1	108	74-130	
Vinyl chloride	ug/L	50	50.7	101	55-141	
Xylene (Total)	ug/L	150	159	106	76-132	

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## REPORT OF LABORATORY ANALYSIS

Page 30 of 32

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## QUALITY CONTROL DATA

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

LABORATORY CONTROL SAMPLE: 241622

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			100	70-126	
Dibromofluoromethane (S)	%			103	80-123	
Toluene-d8 (S)	%			100	80-116	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 241623 241624

Parameter	Units	5021249001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	56.5	57.9	113	116	64-143	2	20	
1,1-Dichloroethane	ug/L	ND	50	50	47.1	49.1	94	98	68-139	4	20	
1,1-Dichloroethene	ug/L	ND	50	50	55.1	56.9	110	114	55-140	3	20	
1,2-Dichloroethane	ug/L	ND	50	50	55.0	57.1	110	114	63-148	4	20	
Benzene	ug/L	ND	50	50	49.0	51.0	98	102	63-141	4	20	
Carbon tetrachloride	ug/L	ND	50	50	42.6	40.0	85	80	54-145	6	20	
Chloroform	ug/L	ND	50	50	50.9	52.4	102	105	67-134	3	20	
cis-1,2-Dichloroethene	ug/L	ND	50	50	49.7	51.1	99	102	65-132	3	20	
Ethylbenzene	ug/L	ND	50	50	52.8	52.8	106	106	44-151	0	20	
Methylene chloride	ug/L	ND	50	50	49.7	51.1	99	102	46-154	3	20	
Naphthalene	ug/L	ND	50	50	51.3	54.8	103	110	44-138	7	20	
Tetrachloroethene	ug/L	ND	50	50	54.4	54.1	109	108	25-146	1	20	
Toluene	ug/L	ND	50	50	54.0	54.5	106	107	59-142	1	20	
trans-1,2-Dichloroethene	ug/L	ND	50	50	54.1	56.4	108	113	60-137	4	20	
Trichloroethene	ug/L	ND	50	50	52.0	54.2	104	108	61-137	4	20	
Vinyl chloride	ug/L	ND	50	50	49.5	50.6	99	101	51-144	2	20	
Xylene (Total)	ug/L	ND	150	150	156	159	104	106	44-152	2	20	
4-Bromofluorobenzene (S)	%						101	99	70-126		20	
Dibromofluoromethane (S)	%						101	101	80-123		20	
Toluene-d8 (S)	%						100	98	80-116		20	

## QUALIFIERS

Project: Michigan Meadows Apts.

Pace Project No.: 5021050

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

### ANALYTE QUALIFIERS

1d      Multiple compounds RPD outside required limits, refer to the LCS for data acceptability and system control

2d      Multiple compounds spike recovery outside required limits, refer to the LCS for data acceptability and system control

H1      Analysis conducted outside the EPA method holding time.

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.


**Section A**  
Required Client Information:

Company: **Musell & Associates, Inc.**  
Address: **110 S. Deassey Ave.**  
City: **Michigan City, IN 46360**  
Email To: **110sdeassey@msn.com**  
Phone: **317-630-9060** Fax: **317-630-9065**  
Requested Due Date/TAT: **2 weeks**

Project Name: **Michigan Meadows Apts.**

Project Number: **MO104L**

Project Reference: **MO104L**

Project Manager: **Mike Tabke**

Pace Profile #: **MO104L**





# Sample Condition Upon Receipt

Client Name: Mundell Project # 5021050

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
Tracking #: \_\_\_\_\_

Optional	Project ID
	Project Date
	Project Name

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 12.3456

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 1.8°C

Biological Tissue is Frozen: Yes  No

Comments:

Date and Initials of person examining contents: 11/20/08 A.R. ZT

Temp should be above freezing to 6°C	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Water	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.	
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased): <u>N/A</u>			

## Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: L. Lotte Date/Time: 11/20/08 17:19

Comments/ Resolution: Left V/T regarding 3 samples + NS/NSD not on coc. Av/Pace  
Per L.L. NS/NSD 1 is 05, NS/NSD 2 is 06

Add Dup & TB.

11/20/08 10:30 Ethene is listed as an 8260 compound. The correct method is RSK75, 20mL vial

Project Manager Review:

Date: 11/20/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

December 09, 2008

Leena Lothe  
Mundell & Associates, Inc.  
110 South Downey Avenue  
Indianapolis, IN 46219

RE: Project: Michigan Plaza  
Pace Project No.: 5021089

Dear Leena Lothe:

Enclosed are the analytical results for sample(s) received by the laboratory on November 21, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Phaedra Zucksworth*

Phaedra Zucksworth

phaedra.zucksworth@pacelabs.com  
Project Manager

Illinois/NELAC Certification Number: 100418  
Indiana Certification Number: C-49-06  
Kansas Certification Number: E-10247  
Kentucky Certification Number: 0042  
Ohio VAP: CL0065  
Pennsylvania: 68-00791  
West Virginia Certification Number: 330

Enclosures

#### REPORT OF LABORATORY ANALYSIS

Page 1 of 36

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## SAMPLE SUMMARY

Project: Michigan Plaza  
Pace Project No.: 5021089

Lab ID	Sample ID	Matrix	Date Collected	Date Received
5021089001	MMW-1S	Water	11/20/08 10:33	11/21/08 11:30
5021089002	MMW-8S	Water	11/20/08 11:00	11/21/08 11:30
5021089003	MMW-9S	Water	11/20/08 09:40	11/21/08 11:30
5021089004	MMW-10S	Water	11/20/08 09:22	11/21/08 11:30
5021089005	MMW-11S	Water	11/20/08 11:15	11/21/08 11:30
5021089006	MMW-168D	Water	11/20/08 11:45	11/21/08 11:30
5021089007	MMW-C-01	Water	11/20/08 13:00	11/21/08 11:30
5021089008	MMW-C-02	Water	11/20/08 12:40	11/21/08 11:30
5021089009	Trip Blank	Water	11/20/08 08:00	11/21/08 11:30
5021089010	Equip. Blank	Water	11/20/08 14:45	11/21/08 11:30

## REPORT OF LABORATORY ANALYSIS

Page 2 of 36

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## SAMPLE ANALYTE COUNT

Project: Michigan Plaza  
Pace Project No.: 5021089

Lab ID	Sample ID	Method	Analysts	Analytes Reported
5021089001	<b>MMW-1S</b>	EPA 353.2	CLS	1
		EPA 8260	SLB	73
		EPA 9038	TPD	1
5021089002	<b>MMW-8S</b>	EPA 8260	SLB	73
5021089003	<b>MMW-9S</b>	EPA 353.2	CLS	1
		EPA 8260	SLB	73
		EPA 9038	TPD	1
5021089004	<b>MMW-10S</b>	SM 2340B	FRW	1
		EPA 8260	SLB	73
		EPA 353.2	CLS	1
5021089005	<b>MMW-11S</b>	EPA 8260	SLB	73
		EPA 9038	TPD	1
		EPA 353.2	CLS	1
5021089006	<b>MMW-168D</b>	EPA 8260	SLB	73
		EPA 9038	TPD	1
		EPA 8260	SLB	73
5021089007	<b>MMW-C-01</b>	EPA 8260	SLB	73
5021089008	<b>MMW-C-02</b>	EPA 8260	SLB	73
5021089009	Trip Blank	EPA 8260	SLB	73
5021089010	Equip. Blank	EPA 8260	SLB	73

## REPORT OF LABORATORY ANALYSIS

Page 3 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-1S	Lab ID: 5021089001	Collected: 11/20/08 10:33	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		100	1		12/02/08 16:48	67-64-1	
Acrolein	ND ug/L		100	1		12/02/08 16:48	107-02-8	
Acrylonitrile	ND ug/L		100	1		12/02/08 16:48	107-13-1	
Benzene	ND ug/L		5.0	1		12/02/08 16:48	71-43-2	
Bromobenzene	ND ug/L		5.0	1		12/02/08 16:48	108-86-1	
Bromoform	ND ug/L		5.0	1		12/02/08 16:48	74-97-5	
Bromochloromethane	ND ug/L		5.0	1		12/02/08 16:48	75-27-4	
Bromodichloromethane	ND ug/L		5.0	1		12/02/08 16:48	75-25-2	
Bromoform	ND ug/L		5.0	1		12/02/08 16:48	74-83-9	
Bromomethane	ND ug/L		5.0	1		12/02/08 16:48	78-93-3	
2-Butanone (MEK)	ND ug/L		25.0	1		12/02/08 16:48	104-51-8	
n-Butylbenzene	ND ug/L		5.0	1		12/02/08 16:48	135-98-8	
sec-Butylbenzene	ND ug/L		5.0	1		12/02/08 16:48	98-06-6	
tert-Butylbenzene	ND ug/L		5.0	1		12/02/08 16:48	75-15-0	
Carbon disulfide	ND ug/L		10.0	1		12/02/08 16:48	56-23-5	
Carbon tetrachloride	ND ug/L		5.0	1		12/02/08 16:48	124-48-1	
Chlorobenzene	ND ug/L		5.0	1		12/02/08 16:48	108-90-7	
Chloroethane	ND ug/L		5.0	1		12/02/08 16:48	75-00-3	
Chloroform	ND ug/L		5.0	1		12/02/08 16:48	67-66-3	
Chloromethane	ND ug/L		5.0	1		12/02/08 16:48	74-87-3	
2-Chlorotoluene	ND ug/L		5.0	1		12/02/08 16:48	95-49-8	
4-Chlorotoluene	ND ug/L		5.0	1		12/02/08 16:48	106-43-4	
Dibromochloromethane	ND ug/L		5.0	1		12/02/08 16:48	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/02/08 16:48	106-93-4	
Dibromomethane	ND ug/L		5.0	1		12/02/08 16:48	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 16:48	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 16:48	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 16:48	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1		12/02/08 16:48	110-57-6	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/02/08 16:48	75-71-8	
1,1-Dichloroethane	ND ug/L		5.0	1		12/02/08 16:48	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/02/08 16:48	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/02/08 16:48	75-35-4	
cis-1,2-Dichloroethene	169 ug/L		5.0	1		12/02/08 16:48	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/02/08 16:48	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 16:48	78-87-5	
1,3-Dichloropropane	ND ug/L		5.0	1		12/02/08 16:48	142-28-9	
2,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 16:48	594-20-7	
1,1-Dichloropropene	ND ug/L		5.0	1		12/02/08 16:48	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 16:48	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 16:48	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		12/02/08 16:48	100-41-4	
Ethyl methacrylate	ND ug/L		100	1		12/02/08 16:48	97-63-2	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/02/08 16:48	87-68-3	
n-Hexane	ND ug/L		5.0	1		12/02/08 16:48	110-54-3	
2-Hexanone	ND ug/L		25.0	1		12/02/08 16:48	591-78-6	
Iodomethane	ND ug/L		10.0	1		12/02/08 16:48	74-88-4	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/02/08 16:48	98-82-8	

Date: 12/09/2008 02:56 PM

## REPORT OF LABORATORY ANALYSIS

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Page 4 of 36

## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-1S	Lab ID: 5021089001	Collected: 11/20/08 10:33	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		12/02/08 16:48	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		12/02/08 16:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		12/02/08 16:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		12/02/08 16:48	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		12/02/08 16:48	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		12/02/08 16:48	103-65-1	
Styrene	ND	ug/L	5.0	1		12/02/08 16:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 16:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 16:48	79-34-5	
Tetrachloroethene	223	ug/L	5.0	1		12/02/08 16:48	127-18-4	
Toluene	ND	ug/L	5.0	1		12/02/08 16:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 16:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 16:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/02/08 16:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		12/02/08 16:48	79-00-5	
Trichloroethene	45.5	ug/L	5.0	1		12/02/08 16:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		12/02/08 16:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		12/02/08 16:48	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 16:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 16:48	108-67-8	
Vinyl acetate	ND	ug/L	10.0	1		12/02/08 16:48	108-05-4	
Vinyl chloride	14.5	ug/L	2.0	1		12/02/08 16:48	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/02/08 16:48	1330-20-7	
Dibromofluoromethane (S)	100 %		80-123	1		12/02/08 16:48	1868-53-7	
4-Bromofluorobenzene (S)	97 %		70-126	1		12/02/08 16:48	460-00-4	
Toluene-d8 (S)	100 %		80-116	1		12/02/08 16:48	2037-26-5	
<b>9038 Sulfate Water</b>	Analytical Method: EPA 9038							
Sulfate	71.3	mg/L	12.5	2.5		12/01/08 14:52	14808-79-8	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/21/08 17:41		

Date: 12/09/2008 02:56 PM

## REPORT OF LABORATORY ANALYSIS

Page 5 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-8S	Lab ID: 5021089002	Collected: 11/20/08 11:00	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		100	1		12/02/08 17:19	67-64-1	
Acrolein	ND ug/L		100	1		12/02/08 17:19	107-02-8	
Acrylonitrile	ND ug/L		100	1		12/02/08 17:19	107-13-1	
Benzene	ND ug/L		5.0	1		12/02/08 17:19	71-43-2	
Bromobenzene	ND ug/L		5.0	1		12/02/08 17:19	108-86-1	
Bromoform	ND ug/L		5.0	1		12/02/08 17:19	74-97-5	
Bromochloromethane	ND ug/L		5.0	1		12/02/08 17:19	75-27-4	
Bromodichloromethane	ND ug/L		5.0	1		12/02/08 17:19	75-25-2	
Bromoform	ND ug/L		5.0	1		12/02/08 17:19	75-25-2	
Bromomethane	ND ug/L		5.0	1		12/02/08 17:19	74-83-9	
2-Butanone (MEK)	ND ug/L		25.0	1		12/02/08 17:19	78-93-3	
n-Butylbenzene	ND ug/L		5.0	1		12/02/08 17:19	104-51-8	
sec-Butylbenzene	ND ug/L		5.0	1		12/02/08 17:19	135-98-8	
tert-Butylbenzene	ND ug/L		5.0	1		12/02/08 17:19	98-06-6	
Carbon disulfide	ND ug/L		10.0	1		12/02/08 17:19	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		12/02/08 17:19	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		12/02/08 17:19	108-90-7	
Chloroethane	ND ug/L		5.0	1		12/02/08 17:19	75-00-3	
Chloroform	ND ug/L		5.0	1		12/02/08 17:19	67-66-3	
Chloromethane	ND ug/L		5.0	1		12/02/08 17:19	74-87-3	
2-Chlorotoluene	ND ug/L		5.0	1		12/02/08 17:19	95-49-8	
4-Chlorotoluene	ND ug/L		5.0	1		12/02/08 17:19	106-43-4	
Dibromochloromethane	ND ug/L		5.0	1		12/02/08 17:19	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/02/08 17:19	106-93-4	
Dibromomethane	ND ug/L		5.0	1		12/02/08 17:19	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 17:19	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 17:19	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 17:19	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1		12/02/08 17:19	110-57-6	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/02/08 17:19	75-71-8	
1,1-Dichloroethane	ND ug/L		5.0	1		12/02/08 17:19	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/02/08 17:19	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/02/08 17:19	75-35-4	
cis-1,2-Dichloroethene	123 ug/L		5.0	1		12/02/08 17:19	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/02/08 17:19	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 17:19	78-87-5	
1,3-Dichloropropane	ND ug/L		5.0	1		12/02/08 17:19	142-28-9	
2,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 17:19	594-20-7	
1,1-Dichloropropene	ND ug/L		5.0	1		12/02/08 17:19	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 17:19	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 17:19	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		12/02/08 17:19	100-41-4	
Ethyl methacrylate	ND ug/L		100	1		12/02/08 17:19	97-63-2	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/02/08 17:19	87-68-3	
n-Hexane	ND ug/L		5.0	1		12/02/08 17:19	110-54-3	
2-Hexanone	ND ug/L		25.0	1		12/02/08 17:19	591-78-6	
Iodomethane	ND ug/L		10.0	1		12/02/08 17:19	74-88-4	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/02/08 17:19	98-82-8	

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## REPORT OF LABORATORY ANALYSIS

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Page 6 of 36

## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-8S	Lab ID: 5021089002	Collected: 11/20/08 11:00	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		12/02/08 17:19	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		12/02/08 17:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		12/02/08 17:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		12/02/08 17:19	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		12/02/08 17:19	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		12/02/08 17:19	103-65-1	
Styrene	ND	ug/L	5.0	1		12/02/08 17:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 17:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 17:19	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		12/02/08 17:19	127-18-4	
Toluene	ND	ug/L	5.0	1		12/02/08 17:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 17:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 17:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/02/08 17:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		12/02/08 17:19	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		12/02/08 17:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		12/02/08 17:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		12/02/08 17:19	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 17:19	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 17:19	108-67-8	
Vinyl acetate	ND	ug/L	10.0	1		12/02/08 17:19	108-05-4	
Vinyl chloride	<b>584</b>	ug/L	20.0	10		12/02/08 17:49	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/02/08 17:19	1330-20-7	
Dibromofluoromethane (S)	102 %		80-123	1		12/02/08 17:19	1868-53-7	
4-Bromofluorobenzene (S)	101 %		70-126	1		12/02/08 17:19	460-00-4	
Toluene-d8 (S)	100 %		80-116	1		12/02/08 17:19	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 7 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-9S	Lab ID: 5021089003	Collected: 11/20/08 09:40	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2340B Hardness, Total (Calc.)</b>	Analytical Method: SM 2340B							
Total Hardness	<b>663</b>	mg/L	1.0	1		12/09/08 14:13		
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND	ug/L	100	1		12/02/08 18:19	67-64-1	
Acrolein	ND	ug/L	100	1		12/02/08 18:19	107-02-8	
Acrylonitrile	ND	ug/L	100	1		12/02/08 18:19	107-13-1	
Benzene	ND	ug/L	5.0	1		12/02/08 18:19	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		12/02/08 18:19	108-86-1	
Bromoform	ND	ug/L	5.0	1		12/02/08 18:19	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		12/02/08 18:19	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		12/02/08 18:19	75-25-2	
Bromomethane	ND	ug/L	5.0	1		12/02/08 18:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		12/02/08 18:19	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		12/02/08 18:19	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		12/02/08 18:19	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		12/02/08 18:19	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		12/02/08 18:19	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		12/02/08 18:19	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		12/02/08 18:19	108-90-7	
Chloroethane	ND	ug/L	5.0	1		12/02/08 18:19	75-00-3	
Chloroform	ND	ug/L	5.0	1		12/02/08 18:19	67-66-3	
Chloromethane	ND	ug/L	5.0	1		12/02/08 18:19	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		12/02/08 18:19	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		12/02/08 18:19	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		12/02/08 18:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		12/02/08 18:19	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		12/02/08 18:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		12/02/08 18:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		12/02/08 18:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		12/02/08 18:19	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		12/02/08 18:19	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		12/02/08 18:19	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/02/08 18:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/02/08 18:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/02/08 18:19	75-35-4	
cis-1,2-Dichloroethene	<b>5820</b>	ug/L	500	100		12/02/08 18:50	156-59-2	
trans-1,2-Dichloroethene	<b>90.2</b>	ug/L	5.0	1		12/02/08 18:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		12/02/08 18:19	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		12/02/08 18:19	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		12/02/08 18:19	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		12/02/08 18:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		12/02/08 18:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		12/02/08 18:19	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		12/02/08 18:19	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		12/02/08 18:19	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		12/02/08 18:19	87-68-3	
n-Hexane	ND	ug/L	5.0	1		12/02/08 18:19	110-54-3	

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Page 8 of 36

## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-9S	Lab ID: 5021089003	Collected: 11/20/08 09:40	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
2-Hexanone	ND ug/L		25.0	1		12/02/08 18:19	591-78-6	
Iodomethane	ND ug/L		10.0	1		12/02/08 18:19	74-88-4	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/02/08 18:19	98-82-8	
p-Isopropyltoluene	ND ug/L		5.0	1		12/02/08 18:19	99-87-6	
Methylene chloride	ND ug/L		5.0	1		12/02/08 18:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		25.0	1		12/02/08 18:19	108-10-1	
Methyl-tert-butyl ether	ND ug/L		4.0	1		12/02/08 18:19	1634-04-4	
Naphthalene	ND ug/L		5.0	1		12/02/08 18:19	91-20-3	
n-Propylbenzene	ND ug/L		5.0	1		12/02/08 18:19	103-65-1	
Styrene	ND ug/L		5.0	1		12/02/08 18:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	1		12/02/08 18:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		5.0	1		12/02/08 18:19	79-34-5	
Tetrachloroethene	ND ug/L		5.0	1		12/02/08 18:19	127-18-4	
Toluene	ND ug/L		5.0	1		12/02/08 18:19	108-88-3	
1,2,3-Trichlorobenzene	ND ug/L		5.0	1		12/02/08 18:19	87-61-6	
1,2,4-Trichlorobenzene	ND ug/L		5.0	1		12/02/08 18:19	120-82-1	
1,1,1-Trichloroethane	ND ug/L		5.0	1		12/02/08 18:19	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	1		12/02/08 18:19	79-00-5	
Trichloroethene	ND ug/L		5.0	1		12/02/08 18:19	79-01-6	
Trichlorofluoromethane	ND ug/L		5.0	1		12/02/08 18:19	75-69-4	
1,2,3-Trichloropropane	ND ug/L		5.0	1		12/02/08 18:19	96-18-4	
1,2,4-Trimethylbenzene	ND ug/L		5.0	1		12/02/08 18:19	95-63-6	
1,3,5-Trimethylbenzene	ND ug/L		5.0	1		12/02/08 18:19	108-67-8	
Vinyl acetate	ND ug/L		10.0	1		12/02/08 18:19	108-05-4	
Vinyl chloride	<b>1010</b> ug/L		200	100		12/02/08 18:50	75-01-4	
Xylene (Total)	ND ug/L		10.0	1		12/02/08 18:19	1330-20-7	
Dibromofluoromethane (S)	110 %		80-123	1		12/02/08 18:19	1868-53-7	
4-Bromofluorobenzene (S)	100 %		70-126	1		12/02/08 18:19	460-00-4	
Toluene-d8 (S)	99 %		80-116	1		12/02/08 18:19	2037-26-5	
<b>9038 Sulfate Water</b>	Analytical Method: EPA 9038							
Sulfate	<b>98.5</b> mg/L		25.0	5		12/01/08 14:52	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND mg/L		0.10	1		11/21/08 17:38		

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## REPORT OF LABORATORY ANALYSIS

Page 9 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-10S	Lab ID: 5021089004	Collected: 11/20/08 09:22	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		100	1		12/02/08 22:51	67-64-1	
Acrolein	ND ug/L		100	1		12/02/08 22:51	107-02-8	
Acrylonitrile	ND ug/L		100	1		12/02/08 22:51	107-13-1	
Benzene	ND ug/L		5.0	1		12/02/08 22:51	71-43-2	
Bromobenzene	ND ug/L		5.0	1		12/02/08 22:51	108-86-1	
Bromochloromethane	ND ug/L		5.0	1		12/02/08 22:51	74-97-5	
Bromodichloromethane	ND ug/L		5.0	1		12/02/08 22:51	75-27-4	
Bromoform	ND ug/L		5.0	1		12/02/08 22:51	75-25-2	
Bromomethane	ND ug/L		5.0	1		12/02/08 22:51	74-83-9	
2-Butanone (MEK)	ND ug/L		25.0	1		12/02/08 22:51	78-93-3	
n-Butylbenzene	ND ug/L		5.0	1		12/02/08 22:51	104-51-8	
sec-Butylbenzene	ND ug/L		5.0	1		12/02/08 22:51	135-98-8	
tert-Butylbenzene	ND ug/L		5.0	1		12/02/08 22:51	98-06-6	
Carbon disulfide	ND ug/L		10.0	1		12/02/08 22:51	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		12/02/08 22:51	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		12/02/08 22:51	108-90-7	
Chloroethane	ND ug/L		5.0	1		12/02/08 22:51	75-00-3	
Chloroform	ND ug/L		5.0	1		12/02/08 22:51	67-66-3	
Chloromethane	ND ug/L		5.0	1		12/02/08 22:51	74-87-3	
2-Chlorotoluene	ND ug/L		5.0	1		12/02/08 22:51	95-49-8	
4-Chlorotoluene	ND ug/L		5.0	1		12/02/08 22:51	106-43-4	
Dibromochloromethane	ND ug/L		5.0	1		12/02/08 22:51	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/02/08 22:51	106-93-4	
Dibromomethane	ND ug/L		5.0	1		12/02/08 22:51	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 22:51	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 22:51	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 22:51	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1		12/02/08 22:51	110-57-6	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/02/08 22:51	75-71-8	
1,1-Dichloroethane	ND ug/L		5.0	1		12/02/08 22:51	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/02/08 22:51	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/02/08 22:51	75-35-4	
cis-1,2-Dichloroethene	212 ug/L		5.0	1		12/02/08 22:51	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/02/08 22:51	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 22:51	78-87-5	
1,3-Dichloropropane	ND ug/L		5.0	1		12/02/08 22:51	142-28-9	
2,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 22:51	594-20-7	
1,1-Dichloropropene	ND ug/L		5.0	1		12/02/08 22:51	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 22:51	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 22:51	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		12/02/08 22:51	100-41-4	
Ethyl methacrylate	ND ug/L		100	1		12/02/08 22:51	97-63-2	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/02/08 22:51	87-68-3	
n-Hexane	ND ug/L		5.0	1		12/02/08 22:51	110-54-3	
2-Hexanone	ND ug/L		25.0	1		12/02/08 22:51	591-78-6	
Iodomethane	ND ug/L		10.0	1		12/02/08 22:51	74-88-4	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/02/08 22:51	98-82-8	

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## REPORT OF LABORATORY ANALYSIS

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Page 10 of 36



## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-10S	Lab ID: 5021089004	Collected: 11/20/08 09:22	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		12/02/08 22:51	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		12/02/08 22:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		12/02/08 22:51	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		12/02/08 22:51	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		12/02/08 22:51	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		12/02/08 22:51	103-65-1	
Styrene	ND	ug/L	5.0	1		12/02/08 22:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 22:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 22:51	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		12/02/08 22:51	127-18-4	
Toluene	ND	ug/L	5.0	1		12/02/08 22:51	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 22:51	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 22:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/02/08 22:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		12/02/08 22:51	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		12/02/08 22:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		12/02/08 22:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		12/02/08 22:51	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 22:51	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 22:51	108-67-8	
Vinyl acetate	ND	ug/L	10.0	1		12/02/08 22:51	108-05-4	
Vinyl chloride	15.9	ug/L	2.0	1		12/02/08 22:51	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/02/08 22:51	1330-20-7	
Dibromofluoromethane (S)	101 %		80-123	1		12/02/08 22:51	1868-53-7	
4-Bromofluorobenzene (S)	100 %		70-126	1		12/02/08 22:51	460-00-4	
Toluene-d8 (S)	100 %		80-116	1		12/02/08 22:51	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 11 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-11S	Lab ID: 5021089005	Collected: 11/20/08 11:15	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		100	1		12/02/08 23:52	67-64-1	
Acrolein	ND ug/L		100	1		12/02/08 23:52	107-02-8	
Acrylonitrile	ND ug/L		100	1		12/02/08 23:52	107-13-1	
Benzene	ND ug/L		5.0	1		12/02/08 23:52	71-43-2	
Bromobenzene	ND ug/L		5.0	1		12/02/08 23:52	108-86-1	
Bromoform	ND ug/L		5.0	1		12/02/08 23:52	74-97-5	
Bromochloromethane	ND ug/L		5.0	1		12/02/08 23:52	75-27-4	
Bromodichloromethane	ND ug/L		5.0	1		12/02/08 23:52	75-25-2	
Bromoform	ND ug/L		5.0	1		12/02/08 23:52	74-83-9	
2-Butanone (MEK)	ND ug/L		25.0	1		12/02/08 23:52	78-93-3	
n-Butylbenzene	ND ug/L		5.0	1		12/02/08 23:52	104-51-8	
sec-Butylbenzene	ND ug/L		5.0	1		12/02/08 23:52	135-98-8	
tert-Butylbenzene	ND ug/L		5.0	1		12/02/08 23:52	98-06-6	
Carbon disulfide	ND ug/L		10.0	1		12/02/08 23:52	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		12/02/08 23:52	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		12/02/08 23:52	108-90-7	
Chloroethane	ND ug/L		5.0	1		12/02/08 23:52	75-00-3	
Chloroform	ND ug/L		5.0	1		12/02/08 23:52	67-66-3	
Chloromethane	ND ug/L		5.0	1		12/02/08 23:52	74-87-3	
2-Chlorotoluene	ND ug/L		5.0	1		12/02/08 23:52	95-49-8	
4-Chlorotoluene	ND ug/L		5.0	1		12/02/08 23:52	106-43-4	
Dibromochloromethane	ND ug/L		5.0	1		12/02/08 23:52	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/02/08 23:52	106-93-4	
Dibromomethane	ND ug/L		5.0	1		12/02/08 23:52	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 23:52	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 23:52	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 23:52	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1		12/02/08 23:52	110-57-6	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/02/08 23:52	75-71-8	
1,1-Dichloroethane	ND ug/L		5.0	1		12/02/08 23:52	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/02/08 23:52	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/02/08 23:52	75-35-4	
cis-1,2-Dichloroethene	554 ug/L		50.0	10		12/03/08 00:22	156-59-2	
trans-1,2-Dichloroethene	23.9 ug/L		5.0	1		12/02/08 23:52	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 23:52	78-87-5	
1,3-Dichloropropane	ND ug/L		5.0	1		12/02/08 23:52	142-28-9	
2,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 23:52	594-20-7	
1,1-Dichloropropene	ND ug/L		5.0	1		12/02/08 23:52	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 23:52	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 23:52	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		12/02/08 23:52	100-41-4	
Ethyl methacrylate	ND ug/L		100	1		12/02/08 23:52	97-63-2	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/02/08 23:52	87-68-3	
n-Hexane	ND ug/L		5.0	1		12/02/08 23:52	110-54-3	
2-Hexanone	ND ug/L		25.0	1		12/02/08 23:52	591-78-6	
Iodomethane	ND ug/L		10.0	1		12/02/08 23:52	74-88-4	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/02/08 23:52	98-82-8	

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## REPORT OF LABORATORY ANALYSIS

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Page 12 of 36

## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-11S	Lab ID: 5021089005	Collected: 11/20/08 11:15	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		12/02/08 23:52	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		12/02/08 23:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		12/02/08 23:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		12/02/08 23:52	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		12/02/08 23:52	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		12/02/08 23:52	103-65-1	
Styrene	ND	ug/L	5.0	1		12/02/08 23:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 23:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 23:52	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		12/02/08 23:52	127-18-4	
Toluene	ND	ug/L	5.0	1		12/02/08 23:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 23:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 23:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/02/08 23:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		12/02/08 23:52	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		12/02/08 23:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		12/02/08 23:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		12/02/08 23:52	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 23:52	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 23:52	108-67-8	
Vinyl acetate	ND	ug/L	10.0	1		12/02/08 23:52	108-05-4	
Vinyl chloride	18.5	ug/L	2.0	1		12/02/08 23:52	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/02/08 23:52	1330-20-7	
Dibromofluoromethane (S)	103 %		80-123	1		12/02/08 23:52	1868-53-7	
4-Bromofluorobenzene (S)	97 %		70-126	1		12/02/08 23:52	460-00-4	
Toluene-d8 (S)	99 %		80-116	1		12/02/08 23:52	2037-26-5	
<b>9038 Sulfate Water</b>	Analytical Method: EPA 9038							
Sulfate	138	mg/L	50.0	10		12/01/08 14:52	14808-79-8	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/21/08 17:42		

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## REPORT OF LABORATORY ANALYSIS

Page 13 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-168D	Lab ID: 5021089006	Collected: 11/20/08 11:45	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		100	1		12/02/08 19:20	67-64-1	
Acrolein	ND ug/L		100	1		12/02/08 19:20	107-02-8	
Acrylonitrile	ND ug/L		100	1		12/02/08 19:20	107-13-1	
Benzene	ND ug/L		5.0	1		12/02/08 19:20	71-43-2	
Bromobenzene	ND ug/L		5.0	1		12/02/08 19:20	108-86-1	
Bromochloromethane	ND ug/L		5.0	1		12/02/08 19:20	74-97-5	
Bromodichloromethane	ND ug/L		5.0	1		12/02/08 19:20	75-27-4	
Bromoform	ND ug/L		5.0	1		12/02/08 19:20	75-25-2	
Bromomethane	ND ug/L		5.0	1		12/02/08 19:20	74-83-9	
2-Butanone (MEK)	ND ug/L		25.0	1		12/02/08 19:20	78-93-3	
n-Butylbenzene	ND ug/L		5.0	1		12/02/08 19:20	104-51-8	
sec-Butylbenzene	ND ug/L		5.0	1		12/02/08 19:20	135-98-8	
tert-Butylbenzene	ND ug/L		5.0	1		12/02/08 19:20	98-06-6	
Carbon disulfide	ND ug/L		10.0	1		12/02/08 19:20	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		12/02/08 19:20	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		12/02/08 19:20	108-90-7	
Chloroethane	ND ug/L		5.0	1		12/02/08 19:20	75-00-3	
Chloroform	ND ug/L		5.0	1		12/02/08 19:20	67-66-3	
Chloromethane	ND ug/L		5.0	1		12/02/08 19:20	74-87-3	
2-Chlorotoluene	ND ug/L		5.0	1		12/02/08 19:20	95-49-8	
4-Chlorotoluene	ND ug/L		5.0	1		12/02/08 19:20	106-43-4	
Dibromochloromethane	ND ug/L		5.0	1		12/02/08 19:20	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/02/08 19:20	106-93-4	
Dibromomethane	ND ug/L		5.0	1		12/02/08 19:20	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 19:20	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 19:20	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/02/08 19:20	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1		12/02/08 19:20	110-57-6	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/02/08 19:20	75-71-8	
1,1-Dichloroethane	ND ug/L		5.0	1		12/02/08 19:20	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/02/08 19:20	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/02/08 19:20	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	1		12/02/08 19:20	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/02/08 19:20	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 19:20	78-87-5	
1,3-Dichloropropane	ND ug/L		5.0	1		12/02/08 19:20	142-28-9	
2,2-Dichloropropane	ND ug/L		5.0	1		12/02/08 19:20	594-20-7	
1,1-Dichloropropene	ND ug/L		5.0	1		12/02/08 19:20	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 19:20	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/02/08 19:20	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		12/02/08 19:20	100-41-4	
Ethyl methacrylate	ND ug/L		100	1		12/02/08 19:20	97-63-2	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/02/08 19:20	87-68-3	
n-Hexane	ND ug/L		5.0	1		12/02/08 19:20	110-54-3	
2-Hexanone	ND ug/L		25.0	1		12/02/08 19:20	591-78-6	
Iodomethane	ND ug/L		10.0	1		12/02/08 19:20	74-88-4	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/02/08 19:20	98-82-8	

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## REPORT OF LABORATORY ANALYSIS

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Page 14 of 36



## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-168D	Lab ID: 5021089006	Collected: 11/20/08 11:45	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		12/02/08 19:20	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		12/02/08 19:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		12/02/08 19:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		12/02/08 19:20	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		12/02/08 19:20	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		12/02/08 19:20	103-65-1	
Styrene	ND	ug/L	5.0	1		12/02/08 19:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 19:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		12/02/08 19:20	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		12/02/08 19:20	127-18-4	
Toluene	ND	ug/L	5.0	1		12/02/08 19:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 19:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		12/02/08 19:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/02/08 19:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		12/02/08 19:20	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		12/02/08 19:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		12/02/08 19:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		12/02/08 19:20	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 19:20	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		12/02/08 19:20	108-67-8	
Vinyl acetate	ND	ug/L	10.0	1		12/02/08 19:20	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		12/02/08 19:20	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/02/08 19:20	1330-20-7	
Dibromofluoromethane (S)	103 %		80-123	1		12/02/08 19:20	1868-53-7	
4-Bromofluorobenzene (S)	101 %		70-126	1		12/02/08 19:20	460-00-4	
Toluene-d8 (S)	99 %		80-116	1		12/02/08 19:20	2037-26-5	
<b>9038 Sulfate Water</b>	Analytical Method: EPA 9038							
Sulfate	<b>39.3</b>	mg/L	12.5	2.5		12/01/08 14:52	14808-79-8	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/21/08 17:43		

Date: 12/09/2008 02:56 PM

## REPORT OF LABORATORY ANALYSIS

Page 15 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-C-01	Lab ID: 5021089007	Collected: 11/20/08 13:00	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		100	1		12/03/08 00:53	67-64-1	
Acrolein	ND ug/L		100	1		12/03/08 00:53	107-02-8	
Acrylonitrile	ND ug/L		100	1		12/03/08 00:53	107-13-1	
Benzene	ND ug/L		5.0	1		12/03/08 00:53	71-43-2	
Bromobenzene	ND ug/L		5.0	1		12/03/08 00:53	108-86-1	
Bromochloromethane	ND ug/L		5.0	1		12/03/08 00:53	74-97-5	
Bromodichloromethane	ND ug/L		5.0	1		12/03/08 00:53	75-27-4	
Bromoform	ND ug/L		5.0	1		12/03/08 00:53	75-25-2	
Bromomethane	ND ug/L		5.0	1		12/03/08 00:53	74-83-9	
2-Butanone (MEK)	ND ug/L		25.0	1		12/03/08 00:53	78-93-3	
n-Butylbenzene	ND ug/L		5.0	1		12/03/08 00:53	104-51-8	
sec-Butylbenzene	ND ug/L		5.0	1		12/03/08 00:53	135-98-8	
tert-Butylbenzene	ND ug/L		5.0	1		12/03/08 00:53	98-06-6	
Carbon disulfide	ND ug/L		10.0	1		12/03/08 00:53	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		12/03/08 00:53	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		12/03/08 00:53	108-90-7	
Chloroethane	ND ug/L		5.0	1		12/03/08 00:53	75-00-3	
Chloroform	ND ug/L		5.0	1		12/03/08 00:53	67-66-3	
Chloromethane	ND ug/L		5.0	1		12/03/08 00:53	74-87-3	
2-Chlorotoluene	ND ug/L		5.0	1		12/03/08 00:53	95-49-8	
4-Chlorotoluene	ND ug/L		5.0	1		12/03/08 00:53	106-43-4	
Dibromochloromethane	ND ug/L		5.0	1		12/03/08 00:53	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/03/08 00:53	106-93-4	
Dibromomethane	ND ug/L		5.0	1		12/03/08 00:53	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 00:53	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 00:53	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 00:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1		12/03/08 00:53	110-57-6	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/03/08 00:53	75-71-8	
1,1-Dichloroethane	ND ug/L		5.0	1		12/03/08 00:53	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/03/08 00:53	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/03/08 00:53	75-35-4	
cis-1,2-Dichloroethene	296 ug/L		50.0	10		12/03/08 18:53	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/03/08 00:53	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/03/08 00:53	78-87-5	
1,3-Dichloropropane	ND ug/L		5.0	1		12/03/08 00:53	142-28-9	
2,2-Dichloropropane	ND ug/L		5.0	1		12/03/08 00:53	594-20-7	
1,1-Dichloropropene	ND ug/L		5.0	1		12/03/08 00:53	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/03/08 00:53	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/03/08 00:53	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		12/03/08 00:53	100-41-4	
Ethyl methacrylate	ND ug/L		100	1		12/03/08 00:53	97-63-2	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/03/08 00:53	87-68-3	
n-Hexane	ND ug/L		5.0	1		12/03/08 00:53	110-54-3	
2-Hexanone	ND ug/L		25.0	1		12/03/08 00:53	591-78-6	
Iodomethane	ND ug/L		10.0	1		12/03/08 00:53	74-88-4	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/03/08 00:53	98-82-8	

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## REPORT OF LABORATORY ANALYSIS

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Page 16 of 36

## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-C-01	Lab ID: 5021089007	Collected: 11/20/08 13:00	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		12/03/08 00:53	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		12/03/08 00:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		12/03/08 00:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		12/03/08 00:53	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		12/03/08 00:53	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		12/03/08 00:53	103-65-1	
Styrene	ND	ug/L	5.0	1		12/03/08 00:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		12/03/08 00:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		12/03/08 00:53	79-34-5	
Tetrachloroethene	15.7	ug/L	5.0	1		12/03/08 00:53	127-18-4	
Toluene	ND	ug/L	5.0	1		12/03/08 00:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		12/03/08 00:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		12/03/08 00:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/03/08 00:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		12/03/08 00:53	79-00-5	
Trichloroethene	8.3	ug/L	5.0	1		12/03/08 00:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		12/03/08 00:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		12/03/08 00:53	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		12/03/08 00:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		12/03/08 00:53	108-67-8	
Vinyl acetate	ND	ug/L	10.0	1		12/03/08 00:53	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		12/03/08 00:53	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/03/08 00:53	1330-20-7	
Dibromofluoromethane (S)	103 %		80-123	1		12/03/08 00:53	1868-53-7	
4-Bromofluorobenzene (S)	99 %		70-126	1		12/03/08 00:53	460-00-4	
Toluene-d8 (S)	98 %		80-116	1		12/03/08 00:53	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 17 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-C-02	Lab ID: 5021089008	Collected: 11/20/08 12:40	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		100	1		12/03/08 01:53	67-64-1	
Acrolein	ND ug/L		100	1		12/03/08 01:53	107-02-8	
Acrylonitrile	ND ug/L		100	1		12/03/08 01:53	107-13-1	
Benzene	ND ug/L		5.0	1		12/03/08 01:53	71-43-2	
Bromobenzene	ND ug/L		5.0	1		12/03/08 01:53	108-86-1	
Bromochloromethane	ND ug/L		5.0	1		12/03/08 01:53	74-97-5	
Bromodichloromethane	ND ug/L		5.0	1		12/03/08 01:53	75-27-4	
Bromoform	ND ug/L		5.0	1		12/03/08 01:53	75-25-2	
Bromomethane	ND ug/L		5.0	1		12/03/08 01:53	74-83-9	
2-Butanone (MEK)	ND ug/L		25.0	1		12/03/08 01:53	78-93-3	
n-Butylbenzene	ND ug/L		5.0	1		12/03/08 01:53	104-51-8	
sec-Butylbenzene	ND ug/L		5.0	1		12/03/08 01:53	135-98-8	
tert-Butylbenzene	ND ug/L		5.0	1		12/03/08 01:53	98-06-6	
Carbon disulfide	ND ug/L		10.0	1		12/03/08 01:53	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		12/03/08 01:53	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		12/03/08 01:53	108-90-7	
Chloroethane	ND ug/L		5.0	1		12/03/08 01:53	75-00-3	
Chloroform	ND ug/L		5.0	1		12/03/08 01:53	67-66-3	
Chloromethane	ND ug/L		5.0	1		12/03/08 01:53	74-87-3	
2-Chlorotoluene	ND ug/L		5.0	1		12/03/08 01:53	95-49-8	
4-Chlorotoluene	ND ug/L		5.0	1		12/03/08 01:53	106-43-4	
Dibromochloromethane	ND ug/L		5.0	1		12/03/08 01:53	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/03/08 01:53	106-93-4	
Dibromomethane	ND ug/L		5.0	1		12/03/08 01:53	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 01:53	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 01:53	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 01:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1		12/03/08 01:53	110-57-6	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/03/08 01:53	75-71-8	
1,1-Dichloroethane	ND ug/L		5.0	1		12/03/08 01:53	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/03/08 01:53	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/03/08 01:53	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	1		12/03/08 01:53	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/03/08 01:53	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/03/08 01:53	78-87-5	
1,3-Dichloropropane	ND ug/L		5.0	1		12/03/08 01:53	142-28-9	
2,2-Dichloropropane	ND ug/L		5.0	1		12/03/08 01:53	594-20-7	
1,1-Dichloropropene	ND ug/L		5.0	1		12/03/08 01:53	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/03/08 01:53	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/03/08 01:53	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		12/03/08 01:53	100-41-4	
Ethyl methacrylate	ND ug/L		100	1		12/03/08 01:53	97-63-2	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/03/08 01:53	87-68-3	
n-Hexane	ND ug/L		5.0	1		12/03/08 01:53	110-54-3	
2-Hexanone	ND ug/L		25.0	1		12/03/08 01:53	591-78-6	
Iodomethane	ND ug/L		10.0	1		12/03/08 01:53	74-88-4	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/03/08 01:53	98-82-8	

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Page 18 of 36



## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: MMW-C-02	Lab ID: 5021089008	Collected: 11/20/08 12:40	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		12/03/08 01:53	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		12/03/08 01:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		12/03/08 01:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		12/03/08 01:53	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		12/03/08 01:53	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		12/03/08 01:53	103-65-1	
Styrene	ND	ug/L	5.0	1		12/03/08 01:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		12/03/08 01:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		12/03/08 01:53	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		12/03/08 01:53	127-18-4	
Toluene	ND	ug/L	5.0	1		12/03/08 01:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		12/03/08 01:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		12/03/08 01:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/03/08 01:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		12/03/08 01:53	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		12/03/08 01:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		12/03/08 01:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		12/03/08 01:53	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		12/03/08 01:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		12/03/08 01:53	108-67-8	
Vinyl acetate	ND	ug/L	10.0	1		12/03/08 01:53	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		12/03/08 01:53	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/03/08 01:53	1330-20-7	
Dibromofluoromethane (S)	103 %		80-123	1		12/03/08 01:53	1868-53-7	
4-Bromofluorobenzene (S)	100 %		70-126	1		12/03/08 01:53	460-00-4	
Toluene-d8 (S)	100 %		80-116	1		12/03/08 01:53	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 19 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: Trip Blank	Lab ID: 5021089009	Collected: 11/20/08 08:00	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		100	1		12/03/08 02:23	67-64-1	
Acrolein	ND ug/L		100	1		12/03/08 02:23	107-02-8	
Acrylonitrile	ND ug/L		100	1		12/03/08 02:23	107-13-1	
Benzene	ND ug/L		5.0	1		12/03/08 02:23	71-43-2	
Bromobenzene	ND ug/L		5.0	1		12/03/08 02:23	108-86-1	
Bromochloromethane	ND ug/L		5.0	1		12/03/08 02:23	74-97-5	
Bromodichloromethane	ND ug/L		5.0	1		12/03/08 02:23	75-27-4	
Bromoform	ND ug/L		5.0	1		12/03/08 02:23	75-25-2	
Bromomethane	ND ug/L		5.0	1		12/03/08 02:23	74-83-9	
2-Butanone (MEK)	ND ug/L		25.0	1		12/03/08 02:23	78-93-3	
n-Butylbenzene	ND ug/L		5.0	1		12/03/08 02:23	104-51-8	
sec-Butylbenzene	ND ug/L		5.0	1		12/03/08 02:23	135-98-8	
tert-Butylbenzene	ND ug/L		5.0	1		12/03/08 02:23	98-06-6	
Carbon disulfide	ND ug/L		10.0	1		12/03/08 02:23	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		12/03/08 02:23	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		12/03/08 02:23	108-90-7	
Chloroethane	ND ug/L		5.0	1		12/03/08 02:23	75-00-3	
Chloroform	ND ug/L		5.0	1		12/03/08 02:23	67-66-3	
Chloromethane	ND ug/L		5.0	1		12/03/08 02:23	74-87-3	
2-Chlorotoluene	ND ug/L		5.0	1		12/03/08 02:23	95-49-8	
4-Chlorotoluene	ND ug/L		5.0	1		12/03/08 02:23	106-43-4	
Dibromochloromethane	ND ug/L		5.0	1		12/03/08 02:23	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/03/08 02:23	106-93-4	
Dibromomethane	ND ug/L		5.0	1		12/03/08 02:23	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 02:23	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 02:23	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 02:23	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1		12/03/08 02:23	110-57-6	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/03/08 02:23	75-71-8	
1,1-Dichloroethane	ND ug/L		5.0	1		12/03/08 02:23	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/03/08 02:23	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/03/08 02:23	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	1		12/03/08 02:23	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/03/08 02:23	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/03/08 02:23	78-87-5	
1,3-Dichloropropane	ND ug/L		5.0	1		12/03/08 02:23	142-28-9	
2,2-Dichloropropane	ND ug/L		5.0	1		12/03/08 02:23	594-20-7	
1,1-Dichloropropene	ND ug/L		5.0	1		12/03/08 02:23	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/03/08 02:23	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/03/08 02:23	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		12/03/08 02:23	100-41-4	
Ethyl methacrylate	ND ug/L		100	1		12/03/08 02:23	97-63-2	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/03/08 02:23	87-68-3	
n-Hexane	ND ug/L		5.0	1		12/03/08 02:23	110-54-3	
2-Hexanone	ND ug/L		25.0	1		12/03/08 02:23	591-78-6	
Iodomethane	ND ug/L		10.0	1		12/03/08 02:23	74-88-4	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/03/08 02:23	98-82-8	

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## REPORT OF LABORATORY ANALYSIS

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Page 20 of 36

## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: Trip Blank	Lab ID: 5021089009	Collected: 11/20/08 08:00	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		12/03/08 02:23	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		12/03/08 02:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		12/03/08 02:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		12/03/08 02:23	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		12/03/08 02:23	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		12/03/08 02:23	103-65-1	
Styrene	ND	ug/L	5.0	1		12/03/08 02:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		12/03/08 02:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		12/03/08 02:23	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		12/03/08 02:23	127-18-4	
Toluene	ND	ug/L	5.0	1		12/03/08 02:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		12/03/08 02:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		12/03/08 02:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/03/08 02:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		12/03/08 02:23	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		12/03/08 02:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		12/03/08 02:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		12/03/08 02:23	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		12/03/08 02:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		12/03/08 02:23	108-67-8	
Vinyl acetate	ND	ug/L	10.0	1		12/03/08 02:23	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		12/03/08 02:23	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/03/08 02:23	1330-20-7	
Dibromofluoromethane (S)	101 %		80-123	1		12/03/08 02:23	1868-53-7	
4-Bromofluorobenzene (S)	98 %		70-126	1		12/03/08 02:23	460-00-4	
Toluene-d8 (S)	99 %		80-116	1		12/03/08 02:23	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 21 of 36

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## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: Equip. Blank	Lab ID: 5021089010	Collected: 11/20/08 14:45	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		100	1		12/03/08 02:54	67-64-1	
Acrolein	ND ug/L		100	1		12/03/08 02:54	107-02-8	
Acrylonitrile	ND ug/L		100	1		12/03/08 02:54	107-13-1	
Benzene	ND ug/L		5.0	1		12/03/08 02:54	71-43-2	
Bromobenzene	ND ug/L		5.0	1		12/03/08 02:54	108-86-1	
Bromoform	ND ug/L		5.0	1		12/03/08 02:54	74-97-5	
Bromochloromethane	ND ug/L		5.0	1		12/03/08 02:54	75-27-4	
Bromodichloromethane	ND ug/L		5.0	1		12/03/08 02:54	75-25-2	
Bromoform	ND ug/L		5.0	1		12/03/08 02:54	74-83-9	
Bromomethane	ND ug/L		5.0	1		12/03/08 02:54	78-93-3	
2-Butanone (MEK)	ND ug/L		25.0	1		12/03/08 02:54	104-51-8	
n-Butylbenzene	ND ug/L		5.0	1		12/03/08 02:54	135-98-8	
sec-Butylbenzene	ND ug/L		5.0	1		12/03/08 02:54	98-06-6	
tert-Butylbenzene	ND ug/L		5.0	1		12/03/08 02:54	124-48-1	
Carbon disulfide	ND ug/L		10.0	1		12/03/08 02:54	56-23-5	
Carbon tetrachloride	ND ug/L		5.0	1		12/03/08 02:54	108-90-7	
Chlorobenzene	ND ug/L		5.0	1		12/03/08 02:54	75-00-3	
Chloroethane	ND ug/L		5.0	1		12/03/08 02:54	67-66-3	
Chloroform	ND ug/L		5.0	1		12/03/08 02:54	74-87-3	
Chloromethane	ND ug/L		5.0	1		12/03/08 02:54	95-49-8	
2-Chlorotoluene	ND ug/L		5.0	1		12/03/08 02:54	106-43-4	
4-Chlorotoluene	ND ug/L		5.0	1		12/03/08 02:54	110-57-6	
Dibromochloromethane	ND ug/L		5.0	1		12/03/08 02:54	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/03/08 02:54	135-98-8	
Dibromomethane	ND ug/L		5.0	1		12/03/08 02:54	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 02:54	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 02:54	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/03/08 02:54	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1		12/03/08 02:54	124-48-1	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/03/08 02:54	156-59-2	
1,1-Dichloroethane	ND ug/L		5.0	1		12/03/08 02:54	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/03/08 02:54	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		12/03/08 02:54	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	1		12/03/08 02:54	156-60-5	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/03/08 02:54	78-87-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/03/08 02:54	142-28-9	
1,3-Dichloropropane	ND ug/L		5.0	1		12/03/08 02:54	594-20-7	
2,2-Dichloropropane	ND ug/L		5.0	1		12/03/08 02:54	563-58-6	
1,1-Dichloropropene	ND ug/L		5.0	1		12/03/08 02:54	10061-01-5	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/03/08 02:54	10061-02-6	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/03/08 02:54	100-41-4	
Ethylbenzene	ND ug/L		5.0	1		12/03/08 02:54	97-63-2	
Ethyl methacrylate	ND ug/L		100	1		12/03/08 02:54	87-68-3	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/03/08 02:54	110-54-3	
n-Hexane	ND ug/L		5.0	1		12/03/08 02:54	591-78-6	
2-Hexanone	ND ug/L		25.0	1		12/03/08 02:54	124-48-1	
Iodomethane	ND ug/L		10.0	1		12/03/08 02:54	98-82-8	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/03/08 02:54	135-98-8	

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## REPORT OF LABORATORY ANALYSIS

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Page 22 of 36



## ANALYTICAL RESULTS

Project: Michigan Plaza  
Pace Project No.: 5021089

Sample: Equip. Blank	Lab ID: 5021089010	Collected: 11/20/08 14:45	Received: 11/21/08 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		12/03/08 02:54	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		12/03/08 02:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		12/03/08 02:54	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		12/03/08 02:54	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		12/03/08 02:54	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		12/03/08 02:54	103-65-1	
Styrene	ND	ug/L	5.0	1		12/03/08 02:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		12/03/08 02:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		12/03/08 02:54	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		12/03/08 02:54	127-18-4	
Toluene	ND	ug/L	5.0	1		12/03/08 02:54	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		12/03/08 02:54	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		12/03/08 02:54	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/03/08 02:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		12/03/08 02:54	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		12/03/08 02:54	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		12/03/08 02:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		12/03/08 02:54	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		12/03/08 02:54	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		12/03/08 02:54	108-67-8	
Vinyl acetate	ND	ug/L	10.0	1		12/03/08 02:54	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		12/03/08 02:54	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/03/08 02:54	1330-20-7	
Dibromofluoromethane (S)	103 %		80-123	1		12/03/08 02:54	1868-53-7	
4-Bromofluorobenzene (S)	99 %		70-126	1		12/03/08 02:54	460-00-4	
Toluene-d8 (S)	100 %		80-116	1		12/03/08 02:54	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

Page 23 of 36

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## QUALITY CONTROL DATA

Project: Michigan Plaza  
Pace Project No.: 5021089

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QC Batch:	WETA/3059	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples:	5021089001, 5021089003, 5021089005, 5021089006		

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METHOD BLANK:	237842	Matrix:	Water
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Associated Lab Samples: 5021089001, 5021089003, 5021089005, 5021089006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	11/21/08 17:36	

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LABORATORY CONTROL SAMPLE: 237843

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.97	97	90-110	

---

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 237844 237845

Parameter	Units	5021071003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	1.5	1	1	2.4	2.4	92	94	90-110	1	20	

## **QUALITY CONTROL DATA**

Project: Michigan Plaza  
Pace Project No.: 5021089

QC Batch: WET/3857 Analysis Method: EPA 9038  
QC Batch Method: EPA 9038 Analysis Description: 9038 Sulfate Water  
Associated Lab Samples: 5021089001, 5021089003, 5021089005, 5021089006

METHOD BLANK: 239928 Matrix: Water

Associated Lab Samples: 5021089001, 5021089003, 5021089005, 5021089006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	5.0	12/01/08 14:52	

LABORATORY CONTROL SAMPLE: 239929

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	20.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 239930 239931

Parameter	Units	MS		MSD		% Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		5021063010	Spike Conc.	Spike Conc.	MS Result						
Sulfate	mg/L	933	1000	1000	2120	1950	118	102	75-125	8	20

## **QUALITY CONTROL DATA**

Project: Michigan Plaza  
Pace Project No.: 5021089

QC Batch: MSV/13107 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 5021089001, 5021089002, 5021089003, 5021089006

METHOD BLANK: 240464 Matrix: Water

Associated Lab Samples: 5021089001, 5021089002, 5021089003, 5021089006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	12/02/08 10:14	
1,1,1-Trichloroethane	ug/L	ND	5.0	12/02/08 10:14	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	12/02/08 10:14	
1,1,2-Trichloroethane	ug/L	ND	5.0	12/02/08 10:14	
1,1-Dichloroethane	ug/L	ND	5.0	12/02/08 10:14	
1,1-Dichloroethene	ug/L	ND	5.0	12/02/08 10:14	
1,1-Dichloropropene	ug/L	ND	5.0	12/02/08 10:14	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	12/02/08 10:14	
1,2,3-Trichloropropane	ug/L	ND	5.0	12/02/08 10:14	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	12/02/08 10:14	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	12/02/08 10:14	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	12/02/08 10:14	
1,2-Dichlorobenzene	ug/L	ND	5.0	12/02/08 10:14	
1,2-Dichloroethane	ug/L	ND	5.0	12/02/08 10:14	
1,2-Dichloropropane	ug/L	ND	5.0	12/02/08 10:14	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	12/02/08 10:14	
1,3-Dichlorobenzene	ug/L	ND	5.0	12/02/08 10:14	
1,3-Dichloropropane	ug/L	ND	5.0	12/02/08 10:14	
1,4-Dichlorobenzene	ug/L	ND	5.0	12/02/08 10:14	
2,2-Dichloropropane	ug/L	ND	5.0	12/02/08 10:14	
2-Butanone (MEK)	ug/L	ND	25.0	12/02/08 10:14	
2-Chlorotoluene	ug/L	ND	5.0	12/02/08 10:14	
2-Hexanone	ug/L	ND	25.0	12/02/08 10:14	
4-Chlorotoluene	ug/L	ND	5.0	12/02/08 10:14	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	12/02/08 10:14	
Acetone	ug/L	ND	100	12/02/08 10:14	
Acrolein	ug/L	ND	100	12/02/08 10:14	
Acrylonitrile	ug/L	ND	100	12/02/08 10:14	
Benzene	ug/L	ND	5.0	12/02/08 10:14	
Bromobenzene	ug/L	ND	5.0	12/02/08 10:14	
Bromochloromethane	ug/L	ND	5.0	12/02/08 10:14	
Bromodichloromethane	ug/L	ND	5.0	12/02/08 10:14	
Bromoform	ug/L	ND	5.0	12/02/08 10:14	
Bromomethane	ug/L	ND	5.0	12/02/08 10:14	
Carbon disulfide	ug/L	ND	10.0	12/02/08 10:14	
Carbon tetrachloride	ug/L	ND	5.0	12/02/08 10:14	
Chlorobenzene	ug/L	ND	5.0	12/02/08 10:14	
Chloroethane	ug/L	ND	5.0	12/02/08 10:14	
Chloroform	ug/L	ND	5.0	12/02/08 10:14	
Chloromethane	ug/L	ND	5.0	12/02/08 10:14	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/02/08 10:14	
cis-1,3-Dichloropropene	ug/L	ND	5.0	12/02/08 10:14	
Dibromochloromethane	ug/L	ND	5.0	12/02/08 10:14	

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## **REPORT OF LABORATORY ANALYSIS**

Page 26 of 36

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## QUALITY CONTROL DATA

Project: Michigan Plaza  
Pace Project No.: 5021089

METHOD BLANK: 240464                          Matrix: Water

Associated Lab Samples: 5021089001, 5021089002, 5021089003, 5021089006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	ND	5.0	12/02/08 10:14	
Dichlorodifluoromethane	ug/L	ND	5.0	12/02/08 10:14	
Ethyl methacrylate	ug/L	ND	100	12/02/08 10:14	
Ethylbenzene	ug/L	ND	5.0	12/02/08 10:14	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	12/02/08 10:14	
Iodomethane	ug/L	ND	10.0	12/02/08 10:14	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	12/02/08 10:14	
Methyl-tert-butyl ether	ug/L	ND	4.0	12/02/08 10:14	
Methylene chloride	ug/L	ND	5.0	12/02/08 10:14	
n-Butylbenzene	ug/L	ND	5.0	12/02/08 10:14	
n-Hexane	ug/L	ND	5.0	12/02/08 10:14	
n-Propylbenzene	ug/L	ND	5.0	12/02/08 10:14	
Naphthalene	ug/L	ND	5.0	12/02/08 10:14	
p-Isopropyltoluene	ug/L	ND	5.0	12/02/08 10:14	
sec-Butylbenzene	ug/L	ND	5.0	12/02/08 10:14	
Styrene	ug/L	ND	5.0	12/02/08 10:14	
tert-Butylbenzene	ug/L	ND	5.0	12/02/08 10:14	
Tetrachloroethene	ug/L	ND	5.0	12/02/08 10:14	
Toluene	ug/L	ND	5.0	12/02/08 10:14	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/02/08 10:14	
trans-1,3-Dichloropropene	ug/L	ND	5.0	12/02/08 10:14	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	12/02/08 10:14	
Trichloroethene	ug/L	ND	5.0	12/02/08 10:14	
Trichlorofluoromethane	ug/L	ND	5.0	12/02/08 10:14	
Vinyl acetate	ug/L	ND	10.0	12/02/08 10:14	
Vinyl chloride	ug/L	ND	2.0	12/02/08 10:14	
Xylene (Total)	ug/L	ND	10.0	12/02/08 10:14	
4-Bromofluorobenzene (S)	%	101	70-126	12/02/08 10:14	
Dibromofluoromethane (S)	%	102	80-123	12/02/08 10:14	
Toluene-d8 (S)	%	100	80-116	12/02/08 10:14	

LABORATORY CONTROL SAMPLE: 240465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	41.5	83	69-130	
1,1,1-Trichloroethane	ug/L	50	44.2	88	69-136	
1,1,2,2-Tetrachloroethane	ug/L	50	49.8	100	69-131	
1,1,2-Trichloroethane	ug/L	50	48.3	97	77-132	
1,1-Dichloroethane	ug/L	50	46.2	92	67-133	
1,1-Dichloroethene	ug/L	50	50.5	101	63-128	
1,1-Dichloropropene	ug/L	50	50.3	101	75-134	
1,2,3-Trichlorobenzene	ug/L	50	48.8	98	58-131	
1,2,3-Trichloropropane	ug/L	50	46.5	93	60-131	
1,2,4-Trichlorobenzene	ug/L	50	45.8	92	60-130	
1,2,4-Trimethylbenzene	ug/L	50	45.5	91	73-130	

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## REPORT OF LABORATORY ANALYSIS

Page 27 of 36

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## QUALITY CONTROL DATA

Project: Michigan Plaza  
Pace Project No.: 5021089

LABORATORY CONTROL SAMPLE: 240465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	50	48.3	97	75-126	
1,2-Dichlorobenzene	ug/L	50	45.7	91	76-124	
1,2-Dichloroethane	ug/L	50	52.6	105	69-139	
1,2-Dichloropropane	ug/L	50	49.9	100	76-129	
1,3,5-Trimethylbenzene	ug/L	50	46.4	93	74-130	
1,3-Dichlorobenzene	ug/L	50	48.0	96	76-125	
1,3-Dichloropropane	ug/L	50	50.1	100	74-126	
1,4-Dichlorobenzene	ug/L	50	45.7	91	75-122	
2,2-Dichloropropane	ug/L	50	65.9	132	53-144	
2-Butanone (MEK)	ug/L	250	256	102	47-189	
2-Chlorotoluene	ug/L	50	46.4	93	72-128	
2-Hexanone	ug/L	250	256	102	57-167	
4-Chlorotoluene	ug/L	50	45.9	92	73-124	
4-Methyl-2-pentanone (MIBK)	ug/L	250	253	101	61-135	
Acetone	ug/L	250	248	99	30-170	
Acrolein	ug/L	1000	330	33	30-170	
Acrylonitrile	ug/L	1000	1060	106	67-136	
Benzene	ug/L	50	47.7	95	78-127	
Bromobenzene	ug/L	50	45.7	91	62-139	
Bromochloromethane	ug/L	50	52.6	105	54-162	
Bromodichloromethane	ug/L	50	44.6	89	69-133	
Bromoform	ug/L	50	33.3	67	60-127	
Bromomethane	ug/L	50	44.8	90	30-170	
Carbon disulfide	ug/L	100	119	119	58-152	
Carbon tetrachloride	ug/L	50	39.5	79	62-143	
Chlorobenzene	ug/L	50	46.7	93	75-123	
Chloroethane	ug/L	50	56.0	112	56-153	
Chloroform	ug/L	50	49.8	100	74-131	
Chloromethane	ug/L	50	44.1	88	35-147	
cis-1,2-Dichloroethene	ug/L	50	48.9	98	74-128	
cis-1,3-Dichloropropene	ug/L	50	48.3	97	58-123	
Dibromochloromethane	ug/L	50	42.2	84	66-131	
Dibromomethane	ug/L	50	50.9	102	73-133	
Dichlorodifluoromethane	ug/L	50	39.8	80	30-170	
Ethyl methacrylate	ug/L	50	42.1J	84	59-138	
Ethylbenzene	ug/L	50	47.4	95	81-126	
Hexachloro-1,3-butadiene	ug/L	50	45.7	91	70-130	
Iodomethane	ug/L	100	113	113	41-170	
Isopropylbenzene (Cumene)	ug/L	50	47.4	95	80-130	
Methyl-tert-butyl ether	ug/L	100	103	103	66-147	
Methylene chloride	ug/L	50	58.2	116	32-164	
n-Butylbenzene	ug/L	50	48.5	97	68-135	
n-Hexane	ug/L	50	69.7	139	69-157	
n-Propylbenzene	ug/L	50	48.6	97	71-132	
Naphthalene	ug/L	50	44.7	89	61-135	
p-Isopropyltoluene	ug/L	50	47.7	95	66-131	
sec-Butylbenzene	ug/L	50	47.5	95	73-130	
Styrene	ug/L	50	46.6	93	74-128	

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## REPORT OF LABORATORY ANALYSIS

Page 28 of 36

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## QUALITY CONTROL DATA

Project: Michigan Plaza  
Pace Project No.: 5021089

LABORATORY CONTROL SAMPLE: 240465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/L	50	37.2	74	63-117	
Tetrachloroethene	ug/L	50	48.2	96	60-119	
Toluene	ug/L	50	47.3	95	75-129	
trans-1,2-Dichloroethene	ug/L	50	49.3	99	71-126	
trans-1,3-Dichloropropene	ug/L	50	44.8	90	54-123	
trans-1,4-Dichloro-2-butene	ug/L	50	49.3J	99	47-141	
Trichloroethene	ug/L	50	48.6	97	74-130	
Trichlorofluoromethane	ug/L	50	53.2	106	62-150	
Vinyl acetate	ug/L	200	162	81	41-145	
Vinyl chloride	ug/L	50	49.3	99	55-141	
Xylene (Total)	ug/L	150	144	96	76-132	
4-Bromofluorobenzene (S)	%			99	70-126	
Dibromofluoromethane (S)	%			103	80-123	
Toluene-d8 (S)	%			101	80-116	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 240466 240467

Parameter	Units	5021063010		MS Spike Conc.		MSD Spike Conc.		MS Result		MSD Result		% Rec % Rec	% Rec Limits	Max RPD RPD	Qual
		Result	Conc.	Conc.	Conc.	Conc.	Conc.	Result	Result	% Rec	MSD % Rec				
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	18.5	34.7	37	69	55-131	61	20				
1,1,1-Trichloroethane	ug/L	ND	50	50	24.7	41.8	49	84	64-143	51	20				
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	27.7	44.0	55	88	64-142	46	20				
1,1,2-Trichloroethane	ug/L	ND	50	50	28.6	43.7	57	87	71-143	42	20				
1,1-Dichloroethane	ug/L	ND	50	50	30.5	46.3	61	93	68-139	41	20				
1,1-Dichloroethene	ug/L	ND	50	50	35.3	53.8	71	108	55-140	41	20				
1,1-Dichloropropene	ug/L	ND	50	50	34.2	52.0	68	104	66-140	41	20				
1,2,3-Trichlorobenzene	ug/L	ND	50	50	29.1	44.6	58	89	33-140	42	20				
1,2,3-Trichloropropane	ug/L	ND	50	50	24.9	39.2	50	78	58-133	45	20				
1,2,4-Trichlorobenzene	ug/L	ND	50	50	27.1	41.7	54	83	28-140	42	20				
1,2,4-Trimethylbenzene	ug/L	ND	50	50	28.6	43.7	57	87	39-146	42	20				
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	26.0	42.8	52	86	67-134	49	20				
1,2-Dichlorobenzene	ug/L	ND	50	50	28.2	43.7	56	87	48-137	43	20				
1,2-Dichloroethane	ug/L	ND	50	50	33.0	49.7	66	99	63-148	40	20				
1,2-Dichloropropane	ug/L	ND	50	50	31.6	48.4	63	97	70-136	42	20				
1,3,5-Trimethylbenzene	ug/L	ND	50	50	29.1	44.2	58	88	39-145	41	20				
1,3-Dichlorobenzene	ug/L	ND	50	50	29.7	45.9	59	92	40-143	43	20				
1,3-Dichloropropane	ug/L	ND	50	50	29.8	46.7	60	93	65-133	44	20				
1,4-Dichlorobenzene	ug/L	ND	50	50	28.2	43.7	56	87	38-142	43	20				
2,2-Dichloropropane	ug/L	ND	50	50	29.8	53.2	60	106	35-157	56	20				
2-Butanone (MEK)	ug/L	ND	250	250	149	226	60	91	62-132	41	20				
2-Chlorotoluene	ug/L	ND	50	50	28.4	45.0	57	90	44-143	45	20				
2-Hexanone	ug/L	ND	250	250	157	246	63	98	61-141	44	20				
4-Chlorotoluene	ug/L	ND	50	50	28.5	43.6	57	87	43-140	42	20				
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	158	242	63	97	57-135	42	20				
Acetone	ug/L	ND	250	250	134	208	54	83	30-170	43	20				
Acrolein	ug/L	ND	1000	1000	1000	1460	100	146	30-170	37	20				
Acrylonitrile	ug/L	ND	1000	1000	644	941	64	94	66-137	37	20				

Date: 12/09/2008 02:56 PM

## REPORT OF LABORATORY ANALYSIS

Page 29 of 36

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## QUALITY CONTROL DATA

Project: Michigan Plaza  
Pace Project No.: 5021089

Parameter	Units	5021063010		MS Spike		MSD Spike		MS		MSD		% Rec	Limits	Max RPD	Max RPD	Max Qual
		Result	Conc.	Conc.	Result	MSD	Result	% Rec	MSD	% Rec	% Rec					
Benzene	ug/L	ND	50	50	31.6	47.8	63	96	63-141	41	20					
Bromobenzene	ug/L	ND	50	50	28.5	44.3	57	89	57-128	43	20					
Bromoform	ug/L	ND	50	50	34.0	51.3	68	103	65-157	41	20					
Bromochloromethane	ug/L	ND	50	50	24.0	39.8	48	80	63-135	49	20					
Bromodichloromethane	ug/L	ND	50	50	17.0	25.7	34	51	58-124	41	20					
Bromomethane	ug/L	ND	50	50	39.5	54.4	79	109	30-170	32	20					
Carbon disulfide	ug/L	ND	100	100	77.4	119	77	119	46-162	42	20					
Carbon tetrachloride	ug/L	ND	50	50	19.4	33.4	39	67	54-145	53	20					
Chlorobenzene	ug/L	ND	50	50	29.4	46.0	59	92	56-133	44	20					
Chloroethane	ug/L	ND	50	50	42.1	61.5	84	123	54-157	37	20					
Chloroform	ug/L	ND	50	50	31.5	49.1	63	98	67-134	44	20					
Chloromethane	ug/L	ND	50	50	33.6	48.2	67	96	36-137	36	20					
cis-1,2-Dichloroethene	ug/L	ND	50	50	32.1	49.2	64	98	65-132	42	20					
cis-1,3-Dichloropropene	ug/L	ND	50	50	24.4	40.5	49	81	46-121	50	20					
Dibromochloromethane	ug/L	ND	50	50	18.3	33.3	37	67	64-124	58	20					
Dibromomethane	ug/L	ND	50	50	31.1	47.9	62	96	67-144	43	20					
Dichlorodifluoromethane	ug/L	ND	50	50	29.7	43.2	59	86	30-163	37	20	1d,2d				
Ethyl methacrylate	ug/L	ND	50	50	20J	35.6J	40	71	52-140	20						
Ethylbenzene	ug/L	ND	50	50	30.5	46.6	61	93	44-151	42	20					
Hexachloro-1,3-butadiene	ug/L	ND	50	50	28.6	43.4	57	87	30-145	41	20					
Iodomethane	ug/L	ND	100	100	55.3	105	55	105	28-168	62	20					
Isopropylbenzene (Cumene)	ug/L	ND	50	50	30.4	47.4	61	95	40-148	44	20					
Methyl-tert-butyl ether	ug/L	ND	100	100	58.4	90.5	58	91	52-156	43	20					
Methylene chloride	ug/L	ND	50	50	36.3	53.4	73	107	46-154	38	20					
n-Butylbenzene	ug/L	ND	50	50	30.6	46.8	61	94	27-153	42	20					
n-Hexane	ug/L	ND	50	50	44.6	70.2	89	140	32-176	44	20					
n-Propylbenzene	ug/L	ND	50	50	30.7	47.4	61	95	40-148	43	20					
Naphthalene	ug/L	ND	50	50	26.9	41.1	54	82	44-138	42	20					
p-Isopropyltoluene	ug/L	ND	50	50	30.3	46.4	61	93	34-146	42	20					
sec-Butylbenzene	ug/L	ND	50	50	30.5	46.7	61	93	38-150	42	20					
Styrene	ug/L	ND	50	50	28.4	45.2	57	90	38-141	46	20					
tert-Butylbenzene	ug/L	ND	50	50	24.0	37.0	48	74	32-133	43	20					
Tetrachloroethene	ug/L	ND	50	50	31.7	49.5	63	99	25-146	44	20					
Toluene	ug/L	ND	50	50	30.4	46.6	61	93	59-142	42	20					
trans-1,2-Dichloroethene	ug/L	ND	50	50	33.9	50.9	68	102	60-137	40	20					
trans-1,3-Dichloropropene	ug/L	ND	50	50	20.3	35.3	41	71	43-117	54	20					
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	26.7J	42.8J	53	86	44-139	20						
Trichloroethene	ug/L	ND	50	50	32.3	48.9	65	98	61-137	41	20					
Trichlorofluoromethane	ug/L	ND	50	50	38.2	57.8	76	116	53-162	41	20					
Vinyl acetate	ug/L	ND	200	200	70.8	117	35	58	24-132	49	20					
Vinyl chloride	ug/L	ND	50	50	38.2	55.7	76	111	51-144	37	20					
Xylene (Total)	ug/L	ND	150	150	86.4	141	58	94	44-152	48	20					
4-Bromofluorobenzene (S)	%						98	102	70-126	20						
Dibromofluoromethane (S)	%							102	101	80-123	20					
Toluene-d8 (S)	%							100	98	80-116	20					

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## REPORT OF LABORATORY ANALYSIS

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## **QUALITY CONTROL DATA**

Project: Michigan Plaza  
Pace Project No.: 5021089

QC Batch: MSV/13110 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 5021089004, 5021089005, 5021089007, 5021089008, 5021089009, 5021089010

METHOD BLANK: 240493 Matrix: Water

Associated Lab Samples: 5021089004, 5021089005, 5021089007, 5021089008, 5021089009, 5021089010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	12/02/08 21:21	
1,1,1-Trichloroethane	ug/L	ND	5.0	12/02/08 21:21	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	12/02/08 21:21	
1,1,2-Trichloroethane	ug/L	ND	5.0	12/02/08 21:21	
1,1-Dichloroethane	ug/L	ND	5.0	12/02/08 21:21	
1,1-Dichloroethene	ug/L	ND	5.0	12/02/08 21:21	
1,1-Dichloropropene	ug/L	ND	5.0	12/02/08 21:21	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	12/02/08 21:21	
1,2,3-Trichloropropane	ug/L	ND	5.0	12/02/08 21:21	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	12/02/08 21:21	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	12/02/08 21:21	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	12/02/08 21:21	
1,2-Dichlorobenzene	ug/L	ND	5.0	12/02/08 21:21	
1,2-Dichloroethane	ug/L	ND	5.0	12/02/08 21:21	
1,2-Dichloropropane	ug/L	ND	5.0	12/02/08 21:21	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	12/02/08 21:21	
1,3-Dichlorobenzene	ug/L	ND	5.0	12/02/08 21:21	
1,3-Dichloropropane	ug/L	ND	5.0	12/02/08 21:21	
1,4-Dichlorobenzene	ug/L	ND	5.0	12/02/08 21:21	
2,2-Dichloropropane	ug/L	ND	5.0	12/02/08 21:21	
2-Butanone (MEK)	ug/L	ND	25.0	12/02/08 21:21	
2-Chlorotoluene	ug/L	ND	5.0	12/02/08 21:21	
2-Hexanone	ug/L	ND	25.0	12/02/08 21:21	
4-Chlorotoluene	ug/L	ND	5.0	12/02/08 21:21	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	12/02/08 21:21	
Acetone	ug/L	ND	100	12/02/08 21:21	
Acrolein	ug/L	ND	100	12/02/08 21:21	
Acrylonitrile	ug/L	ND	100	12/02/08 21:21	
Benzene	ug/L	ND	5.0	12/02/08 21:21	
Bromobenzene	ug/L	ND	5.0	12/02/08 21:21	
Bromochloromethane	ug/L	ND	5.0	12/02/08 21:21	
Bromodichloromethane	ug/L	ND	5.0	12/02/08 21:21	
Bromoform	ug/L	ND	5.0	12/02/08 21:21	
Bromomethane	ug/L	ND	5.0	12/02/08 21:21	
Carbon disulfide	ug/L	ND	10.0	12/02/08 21:21	
Carbon tetrachloride	ug/L	ND	5.0	12/02/08 21:21	
Chlorobenzene	ug/L	ND	5.0	12/02/08 21:21	
Chloroethane	ug/L	ND	5.0	12/02/08 21:21	
Chloroform	ug/L	ND	5.0	12/02/08 21:21	
Chloromethane	ug/L	ND	5.0	12/02/08 21:21	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/02/08 21:21	
cis-1,3-Dichloropropene	ug/L	ND	5.0	12/02/08 21:21	
Dibromochloromethane	ug/L	ND	5.0	12/02/08 21:21	

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## **REPORT OF LABORATORY ANALYSIS**

Page 31 of 36

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## QUALITY CONTROL DATA

Project: Michigan Plaza  
Pace Project No.: 5021089

METHOD BLANK: 240493

Matrix: Water

Associated Lab Samples: 5021089004, 5021089005, 5021089007, 5021089008, 5021089009, 5021089010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	ND	5.0	12/02/08 21:21	
Dichlorodifluoromethane	ug/L	ND	5.0	12/02/08 21:21	
Ethyl methacrylate	ug/L	ND	100	12/02/08 21:21	
Ethylbenzene	ug/L	ND	5.0	12/02/08 21:21	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	12/02/08 21:21	
Iodomethane	ug/L	ND	10.0	12/02/08 21:21	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	12/02/08 21:21	
Methyl-tert-butyl ether	ug/L	ND	4.0	12/02/08 21:21	
Methylene chloride	ug/L	ND	5.0	12/02/08 21:21	
n-Butylbenzene	ug/L	ND	5.0	12/02/08 21:21	
n-Hexane	ug/L	ND	5.0	12/02/08 21:21	
n-Propylbenzene	ug/L	ND	5.0	12/02/08 21:21	
Naphthalene	ug/L	ND	5.0	12/02/08 21:21	
p-Isopropyltoluene	ug/L	ND	5.0	12/02/08 21:21	
sec-Butylbenzene	ug/L	ND	5.0	12/02/08 21:21	
Styrene	ug/L	ND	5.0	12/02/08 21:21	
tert-Butylbenzene	ug/L	ND	5.0	12/02/08 21:21	
Tetrachloroethene	ug/L	ND	5.0	12/02/08 21:21	
Toluene	ug/L	ND	5.0	12/02/08 21:21	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/02/08 21:21	
trans-1,3-Dichloropropene	ug/L	ND	5.0	12/02/08 21:21	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	12/02/08 21:21	
Trichloroethene	ug/L	ND	5.0	12/02/08 21:21	
Trichlorofluoromethane	ug/L	ND	5.0	12/02/08 21:21	
Vinyl acetate	ug/L	ND	10.0	12/02/08 21:21	
Vinyl chloride	ug/L	ND	2.0	12/02/08 21:21	
Xylene (Total)	ug/L	ND	10.0	12/02/08 21:21	
4-Bromofluorobenzene (S)	%	98	70-126	12/02/08 21:21	
Dibromofluoromethane (S)	%	101	80-123	12/02/08 21:21	
Toluene-d8 (S)	%	100	80-116	12/02/08 21:21	

LABORATORY CONTROL SAMPLE: 240494

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.7	87	69-130	
1,1,1-Trichloroethane	ug/L	50	45.8	92	69-136	
1,1,2,2-Tetrachloroethane	ug/L	50	45.4	91	69-131	
1,1,2-Trichloroethane	ug/L	50	47.7	95	77-132	
1,1-Dichloroethane	ug/L	50	48.0	96	67-133	
1,1-Dichloroethene	ug/L	50	52.4	105	63-128	
1,1-Dichloropropene	ug/L	50	51.8	104	75-134	
1,2,3-Trichlorobenzene	ug/L	50	48.1	96	58-131	
1,2,3-Trichloropropane	ug/L	50	40.8	82	60-131	
1,2,4-Trichlorobenzene	ug/L	50	47.6	95	60-130	
1,2,4-Trimethylbenzene	ug/L	50	45.6	91	73-130	

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## REPORT OF LABORATORY ANALYSIS

Page 32 of 36

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## QUALITY CONTROL DATA

Project: Michigan Plaza

Pace Project No.: 5021089

LABORATORY CONTROL SAMPLE: 240494

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	50	47.1	94	75-126	
1,2-Dichlorobenzene	ug/L	50	45.8	92	76-124	
1,2-Dichloroethane	ug/L	50	52.9	106	69-139	
1,2-Dichloropropane	ug/L	50	51.0	102	76-129	
1,3,5-Trimethylbenzene	ug/L	50	46.0	92	74-130	
1,3-Dichlorobenzene	ug/L	50	48.2	96	76-125	
1,3-Dichloropropane	ug/L	50	49.8	100	74-126	
1,4-Dichlorobenzene	ug/L	50	45.8	92	75-122	
2,2-Dichloropropane	ug/L	50	53.1	106	53-144	
2-Butanone (MEK)	ug/L	250	239	95	47-189	
2-Chlorotoluene	ug/L	50	46.7	93	72-128	
2-Hexanone	ug/L	250	236	94	57-167	
4-Chlorotoluene	ug/L	50	46.2	92	73-124	
4-Methyl-2-pentanone (MIBK)	ug/L	250	232	93	61-135	
Acetone	ug/L	250	253	101	30-170	
Acrolein	ug/L	1000	606	61	30-170	
Acrylonitrile	ug/L	1000	1040	104	67-136	
Benzene	ug/L	50	49.3	99	78-127	
Bromobenzene	ug/L	50	48.4	97	62-139	
Bromochloromethane	ug/L	50	55.1	110	54-162	
Bromodichloromethane	ug/L	50	46.2	92	69-133	
Bromoform	ug/L	50	33.1	66	60-127	
Bromomethane	ug/L	50	45.1	90	30-170	
Carbon disulfide	ug/L	100	120	120	58-152	
Carbon tetrachloride	ug/L	50	42.5	85	62-143	
Chlorobenzene	ug/L	50	49.1	98	75-123	
Chloroethane	ug/L	50	67.1	134	56-153	
Chloroform	ug/L	50	52.1	104	74-131	
Chloromethane	ug/L	50	52.1	104	35-147	
cis-1,2-Dichloroethene	ug/L	50	49.6	99	74-128	
cis-1,3-Dichloropropene	ug/L	50	46.5	93	58-123	
Dibromochloromethane	ug/L	50	43.4	87	66-131	
Dibromomethane	ug/L	50	50.8	102	73-133	
Dichlorodifluoromethane	ug/L	50	44.3	89	30-170	
Ethyl methacrylate	ug/L	50	41J	82	59-138	
Ethylbenzene	ug/L	50	49.4	99	81-126	
Hexachloro-1,3-butadiene	ug/L	50	49.4	99	70-130	
Iodomethane	ug/L	100	133	133	41-170	
Isopropylbenzene (Cumene)	ug/L	50	50.3	101	80-130	
Methyl-tert-butyl ether	ug/L	100	97.0	97	66-147	
Methylene chloride	ug/L	50	61.4	123	32-164	
n-Butylbenzene	ug/L	50	49.9	100	68-135	
n-Hexane	ug/L	50	63.0	126	69-157	
n-Propylbenzene	ug/L	50	48.2	96	71-132	
Naphthalene	ug/L	50	43.4	87	61-135	
p-Isopropyltoluene	ug/L	50	47.8	96	66-131	
sec-Butylbenzene	ug/L	50	48.2	96	73-130	
Styrene	ug/L	50	48.8	98	74-128	

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## REPORT OF LABORATORY ANALYSIS

Page 33 of 36

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## QUALITY CONTROL DATA

Project: Michigan Plaza  
Pace Project No.: 5021089

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LABORATORY CONTROL SAMPLE: 240494

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/L	50	37.7	75	63-117	
Tetrachloroethene	ug/L	50	49.7	99	60-119	
Toluene	ug/L	50	48.7	97	75-129	
trans-1,2-Dichloroethene	ug/L	50	51.3	103	71-126	
trans-1,3-Dichloropropene	ug/L	50	41.8	84	54-123	
trans-1,4-Dichloro-2-butene	ug/L	50	44.7J	89	47-141	
Trichloroethene	ug/L	50	50.8	102	74-130	
Trichlorofluoromethane	ug/L	50	57.4	115	62-150	
Vinyl acetate	ug/L	200	162	81	41-145	
Vinyl chloride	ug/L	50	56.6	113	55-141	
Xylene (Total)	ug/L	150	153	102	76-132	
4-Bromofluorobenzene (S)	%			103	70-126	
Dibromofluoromethane (S)	%			104	80-123	
Toluene-d8 (S)	%			101	80-116	

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MATRIX SPIKE SAMPLE: 240495

Parameter	Units	5021089007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	50	23.2	46	55-131	
1,1,1-Trichloroethane	ug/L	ND	50	28.9	58	64-143	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	26.8	54	64-142	
1,1,2-Trichloroethane	ug/L	ND	50	29.7	59	71-143	
1,1-Dichloroethane	ug/L	ND	50	32.2	64	68-139	
1,1-Dichloroethene	ug/L	ND	50	37.4	75	55-140	
1,1-Dichloropropene	ug/L	ND	50	35.3	71	66-140	
1,2,3-Trichlorobenzene	ug/L	ND	50	26.9	54	33-140	
1,2,3-Trichloropropane	ug/L	ND	50	23.9	48	58-133	
1,2,4-Trichlorobenzene	ug/L	ND	50	26.2	52	28-140	
1,2,4-Trimethylbenzene	ug/L	ND	50	28.6	57	39-146	
1,2-Dibromoethane (EDB)	ug/L	ND	50	28.4	57	67-134	
1,2-Dichlorobenzene	ug/L	ND	50	27.9	56	48-137	
1,2-Dichloroethane	ug/L	ND	50	33.8	68	63-148	
1,2-Dichloropropane	ug/L	ND	50	33.1	66	70-136	
1,3,5-Trimethylbenzene	ug/L	ND	50	29.1	58	39-145	
1,3-Dichlorobenzene	ug/L	ND	50	29.2	58	40-143	
1,3-Dichloropropane	ug/L	ND	50	31.4	63	65-133	
1,4-Dichlorobenzene	ug/L	ND	50	27.9	56	38-142	
2,2-Dichloropropane	ug/L	ND	50	30.8	62	35-157	
2-Butanone (MEK)	ug/L	ND	250	168	67	62-132	
2-Chlorotoluene	ug/L	ND	50	29.2	58	44-143	
2-Hexanone	ug/L	ND	250	154	61	61-141	
4-Chlorotoluene	ug/L	ND	50	29.4	59	43-140	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	152	61	57-135	
Acetone	ug/L	ND	250	168	63	30-170	
Acrolein	ug/L	ND	1000	1020	102	30-170	
Acrylonitrile	ug/L	ND	1000	675	67	66-137	
Benzene	ug/L	ND	50	32.6	65	63-141	

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## REPORT OF LABORATORY ANALYSIS

Page 34 of 36

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## QUALITY CONTROL DATA

Project: Michigan Plaza  
Pace Project No.: 5021089

MATRIX SPIKE SAMPLE:	240495						
Parameter	Units	5021089007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromobenzene	ug/L	ND	50	30.3	61	57-128	
Bromoform	ug/L	ND	50	19.1	38	58-124	
Bromochloromethane	ug/L	ND	50	37.1	74	65-157	
Bromodichloromethane	ug/L	ND	50	27.7	55	63-135	
Bromomethane	ug/L	ND	50	27.0	54	30-170	
Carbon disulfide	ug/L	ND	100	85.5	86	46-162	
Carbon tetrachloride	ug/L	ND	50	24.2	48	54-145	
Chlorobenzene	ug/L	ND	50	30.8	62	56-133	
Chloroethane	ug/L	ND	50	77.6	155	54-157	
Chloroform	ug/L	ND	50	33.4	67	67-134	
Chloromethane	ug/L	ND	50	38.3	77	36-137	
cis-1,2-Dichloroethene	ug/L	296	50	360	128	65-132	
cis-1,3-Dichloropropene	ug/L	ND	50	26.5	53	46-121	
Dibromochloromethane	ug/L	ND	50	22.8	46	64-124	
Dibromomethane	ug/L	ND	50	33.1	66	67-144	
Dichlorodifluoromethane	ug/L	ND	50	31.0	62	30-163 1d	
Ethyl methacrylate	ug/L	ND	50	24J	48	52-140	
Ethylbenzene	ug/L	ND	50	32.3	65	44-151	
Hexachloro-1,3-butadiene	ug/L	ND	50	28.4	57	30-145	
Iodomethane	ug/L	ND	100	76.0	76	28-168	
Isopropylbenzene (Cumene)	ug/L	ND	50	32.8	66	40-148	
Methyl-tert-butyl ether	ug/L	ND	100	59.7	60	52-156	
Methylene chloride	ug/L	ND	50	39.3	79	46-154	
n-Butylbenzene	ug/L	ND	50	30.3	61	27-153	
n-Hexane	ug/L	ND	50	45.2	90	32-176	
n-Propylbenzene	ug/L	ND	50	30.5	61	40-148	
Naphthalene	ug/L	ND	50	24.2	48	44-138	
p-Isopropyltoluene	ug/L	ND	50	29.5	59	34-146	
sec-Butylbenzene	ug/L	ND	50	30.5	61	38-150	
Styrene	ug/L	ND	50	30.9	62	38-141	
tert-Butylbenzene	ug/L	ND	50	23.9	48	32-133	
Tetrachloroethene	ug/L	15.7	50	48.3	65	25-146	
Toluene	ug/L	ND	50	32.3	65	59-142	
trans-1,2-Dichloroethene	ug/L	ND	50	38.5	72	60-137	
trans-1,3-Dichloropropene	ug/L	ND	50	22.6	45	43-117	
trans-1,4-Dichloro-2-butene	ug/L	ND	50	27.2J	54	44-139	
Trichloroethene	ug/L	8.3	50	41.3	66	61-137	
Trichlorofluoromethane	ug/L	ND	50	40.3	81	53-162	
Vinyl acetate	ug/L	ND	200	86.6	43	24-132	
Vinyl chloride	ug/L	ND	50	42.3	85	51-144	
Xylene (Total)	ug/L	ND	150	94.0	63	44-152	
4-Bromofluorobenzene (S)	%				104	70-126	
Dibromofluoromethane (S)	%				104	80-123	
Toluene-d8 (S)	%				101	80-116	

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## REPORT OF LABORATORY ANALYSIS

Page 35 of 36

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## QUALIFIERS

Project: Michigan Plaza  
Pace Project No.: 5021089

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

### ANALYTE QUALIFIERS

- 1d      Multiple compounds % recoveries are outside of the required limits, refer to the LCS for data acceptability and system control.  
2d      Multiple compounds RPD's are outside of the required limits, refer to the LCS for data acceptability and system control.



**CHAIN-OF-CUSTODY / Analytical Request Document**

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

## Sample Condition Upon Receipt

*Pace Analytical*Client Name MUNDELLProject # SD21089Courier:  FedEx  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals Intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  Other foamThermometer Used 123456 Type of Ice: Wet Blue None  Samples in cooling process has begunCooler Temperature 2.0°C

Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

Date Initials of person examining  
cooling process LL & DWT

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <i>Nitrate Took copy to Wetcher</i>
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<i>1/5</i>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed      Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

## Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_Project Manager Review: M. MajorDate: 11/21/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

December 15, 2008

Leena Lothe  
Mundell & Associates, Inc.  
110 South Downey Avenue  
Indianapolis, IN 46219

RE: Project: Michigan Meadows  
Pace Project No.: 5021301

Dear Leena Lothe:

Enclosed are the analytical results for sample(s) received by the laboratory between December 02, 2008 and December 04, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Phaedra Zucksworth*

Phaedra Zucksworth

phaedra.zucksworth@pacelabs.com  
Project Manager

Illinois/NELAC Certification Number: 100418  
Indiana Certification Number: C-49-06  
Kansas Certification Number: E-10247  
Kentucky Certification Number: 0042  
Ohio VAP: CL0065  
Pennsylvania: 68-00791  
West Virginia Certification Number: 330

Enclosures

#### REPORT OF LABORATORY ANALYSIS

Page 1 of 19

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## SAMPLE SUMMARY

Project: Michigan Meadows  
 Pace Project No.: 5021301

Lab ID	Sample ID	Matrix	Date Collected	Date Received
5021301001	MMW-11S (8-10')	Solid	11/21/08 15:00	12/02/08 10:41
5021301002	MMW-12S (10-12')	Solid	11/24/08 11:30	12/02/08 10:41
5021301003	MMW-13D (6-8')	Solid	11/21/08 14:10	12/02/08 10:41
5021301004	MW-168S	Water	12/02/08 11:15	12/04/08 10:42

## REPORT OF LABORATORY ANALYSIS

Page 2 of 19

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## SAMPLE ANALYTE COUNT

Project: Michigan Meadows  
Pace Project No.: 5021301

Lab ID	Sample ID	Method	Analysts	Analytes Reported
5021301001	<b>MMW-11S (8-10')</b>	ASTM D2974-87	RAK	1
		EPA 8260	ALA	73
5021301002	<b>MMW-12S (10-12')</b>	ASTM D2974-87	RAK	1
		EPA 8260	ALA	73
5021301003	<b>MMW-13D (6-8')</b>	ASTM D2974-87	RAK	1
		EPA 8260	ALA	73
5021301004	<b>MW-168S</b>	EPA 8260	SLB	20

## REPORT OF LABORATORY ANALYSIS

Page 3 of 19

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## ANALYTICAL RESULTS

Project: Michigan Meadows  
Pace Project No.: 5021301

**Sample: MMW-11S (8-10')**      Lab ID: **5021301001**      Collected: 11/21/08 15:00      Received: 12/02/08 10:41      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5030 Low Level</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		114	1		12/05/08 01:44	67-64-1	
Acrolein	ND ug/kg		114	1		12/05/08 01:44	107-02-8	
Acrylonitrile	ND ug/kg		114	1		12/05/08 01:44	107-13-1	
Benzene	ND ug/kg		5.7	1		12/05/08 01:44	71-43-2	
Bromobenzene	ND ug/kg		5.7	1		12/05/08 01:44	108-86-1	
Bromochloromethane	ND ug/kg		5.7	1		12/05/08 01:44	74-97-5	
Bromodichloromethane	ND ug/kg		5.7	1		12/05/08 01:44	75-27-4	
Bromoform	ND ug/kg		5.7	1		12/05/08 01:44	75-25-2	
Bromomethane	ND ug/kg		5.7	1		12/05/08 01:44	74-83-9	
2-Butanone (MEK)	ND ug/kg		28.4	1		12/05/08 01:44	78-93-3	
n-Butylbenzene	ND ug/kg		5.7	1		12/05/08 01:44	104-51-8	
sec-Butylbenzene	ND ug/kg		5.7	1		12/05/08 01:44	135-98-8	
tert-Butylbenzene	ND ug/kg		5.7	1		12/05/08 01:44	98-06-6	
Carbon disulfide	ND ug/kg		11.4	1		12/05/08 01:44	75-15-0	
Carbon tetrachloride	ND ug/kg		5.7	1		12/05/08 01:44	56-23-5	
Chlorobenzene	ND ug/kg		5.7	1		12/05/08 01:44	108-90-7	
Chloroethane	ND ug/kg		5.7	1		12/05/08 01:44	75-00-3	
Chloroform	ND ug/kg		5.7	1		12/05/08 01:44	67-66-3	
Chloromethane	ND ug/kg		5.7	1		12/05/08 01:44	74-87-3	
2-Chlorotoluene	ND ug/kg		5.7	1		12/05/08 01:44	95-49-8	
4-Chlorotoluene	ND ug/kg		5.7	1		12/05/08 01:44	106-43-4	
Dibromochloromethane	ND ug/kg		5.7	1		12/05/08 01:44	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		5.7	1		12/05/08 01:44	106-93-4	
Dibromomethane	ND ug/kg		5.7	1		12/05/08 01:44	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		5.7	1		12/05/08 01:44	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		5.7	1		12/05/08 01:44	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		5.7	1		12/05/08 01:44	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/kg		114	1		12/05/08 01:44	110-57-6	
Dichlorodifluoromethane	ND ug/kg		5.7	1		12/05/08 01:44	75-71-8	
1,1-Dichloroethane	ND ug/kg		5.7	1		12/05/08 01:44	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.7	1		12/05/08 01:44	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.7	1		12/05/08 01:44	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.7	1		12/05/08 01:44	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.7	1		12/05/08 01:44	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.7	1		12/05/08 01:44	78-87-5	
1,3-Dichloropropane	ND ug/kg		5.7	1		12/05/08 01:44	142-28-9	
2,2-Dichloropropane	ND ug/kg		5.7	1		12/05/08 01:44	594-20-7	
1,1-Dichloropropene	ND ug/kg		5.7	1		12/05/08 01:44	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		5.7	1		12/05/08 01:44	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.7	1		12/05/08 01:44	10061-02-6	
Ethylbenzene	ND ug/kg		5.7	1		12/05/08 01:44	100-41-4	
Ethyl methacrylate	ND ug/kg		11.4	1		12/05/08 01:44	97-63-2	
Hexachloro-1,3-butadiene	ND ug/kg		5.7	1		12/05/08 01:44	87-68-3	
n-Hexane	ND ug/kg		5.7	1		12/05/08 01:44	110-54-3	
2-Hexanone	ND ug/kg		114	1		12/05/08 01:44	591-78-6	
Iodomethane	ND ug/kg		114	1		12/05/08 01:44	74-88-4	

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## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Michigan Meadows  
Pace Project No.: 5021301

Sample: MMW-11S (8-10') Lab ID: 5021301001 Collected: 11/21/08 15:00 Received: 12/02/08 10:41 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5030 Low Level</b>	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND ug/kg		5.7	1		12/05/08 01:44	98-82-8	
p-Isopropyltoluene	ND ug/kg		5.7	1		12/05/08 01:44	99-87-6	
Methylene chloride	ND ug/kg		22.7	1		12/05/08 01:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		28.4	1		12/05/08 01:44	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		5.7	1		12/05/08 01:44	1634-04-4	
Naphthalene	ND ug/kg		5.7	1		12/05/08 01:44	91-20-3	
n-Propylbenzene	ND ug/kg		5.7	1		12/05/08 01:44	103-65-1	
Styrene	ND ug/kg		5.7	1		12/05/08 01:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		5.7	1		12/05/08 01:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.7	1		12/05/08 01:44	79-34-5	
Tetrachloroethene	ND ug/kg		5.7	1		12/05/08 01:44	127-18-4	
Toluene	ND ug/kg		5.7	1		12/05/08 01:44	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		5.7	1		12/05/08 01:44	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		5.7	1		12/05/08 01:44	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		5.7	1		12/05/08 01:44	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.7	1		12/05/08 01:44	79-00-5	
Trichloroethene	ND ug/kg		5.7	1		12/05/08 01:44	79-01-6	
Trichlorofluoromethane	ND ug/kg		5.7	1		12/05/08 01:44	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		5.7	1		12/05/08 01:44	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		5.7	1		12/05/08 01:44	95-63-6	
1,3,5-Trimethylbenzene	ND ug/kg		5.7	1		12/05/08 01:44	108-67-8	
Vinyl acetate	ND ug/kg		114	1		12/05/08 01:44	108-05-4	
Vinyl chloride	ND ug/kg		5.7	1		12/05/08 01:44	75-01-4	
Xylene (Total)	ND ug/kg		11.4	1		12/05/08 01:44	1330-20-7	
Dibromofluoromethane (S)	105 %		80-124	1		12/05/08 01:44	1868-53-7	
Toluene-d8 (S)	100 %		58-145	1		12/05/08 01:44	2037-26-5	
4-Bromofluorobenzene (S)	102 %		61-131	1		12/05/08 01:44	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87							
Percent Moisture	<b>12.0 %</b>		0.10	1		12/05/08 16:44		

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## REPORT OF LABORATORY ANALYSIS

Page 5 of 19

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## ANALYTICAL RESULTS

Project: Michigan Meadows

Pace Project No.: 5021301

Sample: MMW-12S (10-12') Lab ID: 5021301002 Collected: 11/24/08 11:30 Received: 12/02/08 10:41 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5030 Low Level</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		109	1		12/05/08 03:32	67-64-1	
Acrolein	ND ug/kg		109	1		12/05/08 03:32	107-02-8	
Acrylonitrile	ND ug/kg		109	1		12/05/08 03:32	107-13-1	
Benzene	ND ug/kg		5.5	1		12/05/08 03:32	71-43-2	
Bromobenzene	ND ug/kg		5.5	1		12/05/08 03:32	108-86-1	
Bromochloromethane	ND ug/kg		5.5	1		12/05/08 03:32	74-97-5	
Bromodichloromethane	ND ug/kg		5.5	1		12/05/08 03:32	75-27-4	
Bromoform	ND ug/kg		5.5	1		12/05/08 03:32	75-25-2	
Bromomethane	ND ug/kg		5.5	1		12/05/08 03:32	74-83-9	
2-Butanone (MEK)	ND ug/kg		27.3	1		12/05/08 03:32	78-93-3	
n-Butylbenzene	ND ug/kg		5.5	1		12/05/08 03:32	104-51-8	
sec-Butylbenzene	ND ug/kg		5.5	1		12/05/08 03:32	135-98-8	
tert-Butylbenzene	ND ug/kg		5.5	1		12/05/08 03:32	98-06-6	
Carbon disulfide	ND ug/kg		10.9	1		12/05/08 03:32	75-15-0	
Carbon tetrachloride	ND ug/kg		5.5	1		12/05/08 03:32	56-23-5	
Chlorobenzene	ND ug/kg		5.5	1		12/05/08 03:32	108-90-7	
Chloroethane	ND ug/kg		5.5	1		12/05/08 03:32	75-00-3	
Chloroform	ND ug/kg		5.5	1		12/05/08 03:32	67-66-3	
Chloromethane	ND ug/kg		5.5	1		12/05/08 03:32	74-87-3	
2-Chlorotoluene	ND ug/kg		5.5	1		12/05/08 03:32	95-49-8	
4-Chlorotoluene	ND ug/kg		5.5	1		12/05/08 03:32	106-43-4	
Dibromochloromethane	ND ug/kg		5.5	1		12/05/08 03:32	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		5.5	1		12/05/08 03:32	106-93-4	
Dibromomethane	ND ug/kg		5.5	1		12/05/08 03:32	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		5.5	1		12/05/08 03:32	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		5.5	1		12/05/08 03:32	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		5.5	1		12/05/08 03:32	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/kg		109	1		12/05/08 03:32	110-57-6	
Dichlorodifluoromethane	ND ug/kg		5.5	1		12/05/08 03:32	75-71-8	
1,1-Dichloroethane	ND ug/kg		5.5	1		12/05/08 03:32	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.5	1		12/05/08 03:32	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.5	1		12/05/08 03:32	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.5	1		12/05/08 03:32	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.5	1		12/05/08 03:32	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.5	1		12/05/08 03:32	78-87-5	
1,3-Dichloropropane	ND ug/kg		5.5	1		12/05/08 03:32	142-28-9	
2,2-Dichloropropane	ND ug/kg		5.5	1		12/05/08 03:32	594-20-7	
1,1-Dichloropropene	ND ug/kg		5.5	1		12/05/08 03:32	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		5.5	1		12/05/08 03:32	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.5	1		12/05/08 03:32	10061-02-6	
Ethylbenzene	ND ug/kg		5.5	1		12/05/08 03:32	100-41-4	
Ethyl methacrylate	ND ug/kg		10.9	1		12/05/08 03:32	97-63-2	
Hexachloro-1,3-butadiene	ND ug/kg		5.5	1		12/05/08 03:32	87-68-3	
n-Hexane	ND ug/kg		5.5	1		12/05/08 03:32	110-54-3	
2-Hexanone	ND ug/kg		109	1		12/05/08 03:32	591-78-6	
Iodomethane	ND ug/kg		109	1		12/05/08 03:32	74-88-4	

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## REPORT OF LABORATORY ANALYSIS

Page 6 of 19

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## ANALYTICAL RESULTS

Project: Michigan Meadows  
Pace Project No.: 5021301

Sample: MMW-12S (10-12') Lab ID: 5021301002 Collected: 11/24/08 11:30 Received: 12/02/08 10:41 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5030 Low Level</b>	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND ug/kg		5.5	1		12/05/08 03:32	98-82-8	
p-Isopropyltoluene	ND ug/kg		5.5	1		12/05/08 03:32	99-87-6	
Methylene chloride	ND ug/kg		21.8	1		12/05/08 03:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		27.3	1		12/05/08 03:32	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		5.5	1		12/05/08 03:32	1634-04-4	
Naphthalene	ND ug/kg		5.5	1		12/05/08 03:32	91-20-3	
n-Propylbenzene	ND ug/kg		5.5	1		12/05/08 03:32	103-65-1	
Styrene	ND ug/kg		5.5	1		12/05/08 03:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		5.5	1		12/05/08 03:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.5	1		12/05/08 03:32	79-34-5	
Tetrachloroethene	ND ug/kg		5.5	1		12/05/08 03:32	127-18-4	
Toluene	ND ug/kg		5.5	1		12/05/08 03:32	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		5.5	1		12/05/08 03:32	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		5.5	1		12/05/08 03:32	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		5.5	1		12/05/08 03:32	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.5	1		12/05/08 03:32	79-00-5	
Trichloroethene	ND ug/kg		5.5	1		12/05/08 03:32	79-01-6	
Trichlorofluoromethane	ND ug/kg		5.5	1		12/05/08 03:32	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		5.5	1		12/05/08 03:32	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		5.5	1		12/05/08 03:32	95-63-6	
1,3,5-Trimethylbenzene	ND ug/kg		5.5	1		12/05/08 03:32	108-67-8	
Vinyl acetate	ND ug/kg		109	1		12/05/08 03:32	108-05-4	
Vinyl chloride	ND ug/kg		5.5	1		12/05/08 03:32	75-01-4	
Xylene (Total)	ND ug/kg		10.9	1		12/05/08 03:32	1330-20-7	
Dibromofluoromethane (S)	105 %		80-124	1		12/05/08 03:32	1868-53-7	
Toluene-d8 (S)	99 %		58-145	1		12/05/08 03:32	2037-26-5	
4-Bromofluorobenzene (S)	100 %		61-131	1		12/05/08 03:32	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87							
Percent Moisture	<b>8.3 %</b>		0.10	1		12/05/08 16:44		

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## REPORT OF LABORATORY ANALYSIS

Page 7 of 19

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## ANALYTICAL RESULTS

Project: Michigan Meadows

Pace Project No.: 5021301

Sample: MMW-13D (6-8') Lab ID: 5021301003 Collected: 11/21/08 14:10 Received: 12/02/08 10:41 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5030 Low Level</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		104	1		12/05/08 04:09	67-64-1	
Acrolein	ND ug/kg		104	1		12/05/08 04:09	107-02-8	
Acrylonitrile	ND ug/kg		104	1		12/05/08 04:09	107-13-1	
Benzene	ND ug/kg		5.2	1		12/05/08 04:09	71-43-2	
Bromobenzene	ND ug/kg		5.2	1		12/05/08 04:09	108-86-1	
Bromochloromethane	ND ug/kg		5.2	1		12/05/08 04:09	74-97-5	
Bromodichloromethane	ND ug/kg		5.2	1		12/05/08 04:09	75-27-4	
Bromoform	ND ug/kg		5.2	1		12/05/08 04:09	75-25-2	
Bromomethane	ND ug/kg		5.2	1		12/05/08 04:09	74-83-9	
2-Butanone (MEK)	ND ug/kg		26.0	1		12/05/08 04:09	78-93-3	
n-Butylbenzene	ND ug/kg		5.2	1		12/05/08 04:09	104-51-8	
sec-Butylbenzene	ND ug/kg		5.2	1		12/05/08 04:09	135-98-8	
tert-Butylbenzene	ND ug/kg		5.2	1		12/05/08 04:09	98-06-6	
Carbon disulfide	ND ug/kg		10.4	1		12/05/08 04:09	75-15-0	
Carbon tetrachloride	ND ug/kg		5.2	1		12/05/08 04:09	56-23-5	
Chlorobenzene	ND ug/kg		5.2	1		12/05/08 04:09	108-90-7	
Chloroethane	ND ug/kg		5.2	1		12/05/08 04:09	75-00-3	
Chloroform	ND ug/kg		5.2	1		12/05/08 04:09	67-66-3	
Chloromethane	ND ug/kg		5.2	1		12/05/08 04:09	74-87-3	
2-Chlorotoluene	ND ug/kg		5.2	1		12/05/08 04:09	95-49-8	
4-Chlorotoluene	ND ug/kg		5.2	1		12/05/08 04:09	106-43-4	
Dibromochloromethane	ND ug/kg		5.2	1		12/05/08 04:09	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		5.2	1		12/05/08 04:09	106-93-4	
Dibromomethane	ND ug/kg		5.2	1		12/05/08 04:09	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		5.2	1		12/05/08 04:09	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		5.2	1		12/05/08 04:09	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		5.2	1		12/05/08 04:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/kg		104	1		12/05/08 04:09	110-57-6	
Dichlorodifluoromethane	ND ug/kg		5.2	1		12/05/08 04:09	75-71-8	
1,1-Dichloroethane	ND ug/kg		5.2	1		12/05/08 04:09	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.2	1		12/05/08 04:09	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.2	1		12/05/08 04:09	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.2	1		12/05/08 04:09	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.2	1		12/05/08 04:09	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.2	1		12/05/08 04:09	78-87-5	
1,3-Dichloropropane	ND ug/kg		5.2	1		12/05/08 04:09	142-28-9	
2,2-Dichloropropane	ND ug/kg		5.2	1		12/05/08 04:09	594-20-7	
1,1-Dichloropropene	ND ug/kg		5.2	1		12/05/08 04:09	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		5.2	1		12/05/08 04:09	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.2	1		12/05/08 04:09	10061-02-6	
Ethylbenzene	ND ug/kg		5.2	1		12/05/08 04:09	100-41-4	
Ethyl methacrylate	ND ug/kg		10.4	1		12/05/08 04:09	97-63-2	
Hexachloro-1,3-butadiene	ND ug/kg		5.2	1		12/05/08 04:09	87-68-3	
n-Hexane	ND ug/kg		5.2	1		12/05/08 04:09	110-54-3	
2-Hexanone	ND ug/kg		104	1		12/05/08 04:09	591-78-6	
Iodomethane	ND ug/kg		104	1		12/05/08 04:09	74-88-4	

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

Page 8 of 19

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## ANALYTICAL RESULTS

Project: Michigan Meadows  
Pace Project No.: 5021301

Sample: MMW-13D (6-8') Lab ID: 5021301003 Collected: 11/21/08 14:10 Received: 12/02/08 10:41 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5030 Low Level</b>	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND ug/kg		5.2	1		12/05/08 04:09	98-82-8	
p-Isopropyltoluene	ND ug/kg		5.2	1		12/05/08 04:09	99-87-6	
Methylene chloride	ND ug/kg		20.8	1		12/05/08 04:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		26.0	1		12/05/08 04:09	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		5.2	1		12/05/08 04:09	1634-04-4	
Naphthalene	ND ug/kg		5.2	1		12/05/08 04:09	91-20-3	
n-Propylbenzene	ND ug/kg		5.2	1		12/05/08 04:09	103-65-1	
Styrene	ND ug/kg		5.2	1		12/05/08 04:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		5.2	1		12/05/08 04:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.2	1		12/05/08 04:09	79-34-5	
Tetrachloroethene	ND ug/kg		5.2	1		12/05/08 04:09	127-18-4	
Toluene	ND ug/kg		5.2	1		12/05/08 04:09	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		5.2	1		12/05/08 04:09	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		5.2	1		12/05/08 04:09	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		5.2	1		12/05/08 04:09	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.2	1		12/05/08 04:09	79-00-5	
Trichloroethene	ND ug/kg		5.2	1		12/05/08 04:09	79-01-6	
Trichlorofluoromethane	ND ug/kg		5.2	1		12/05/08 04:09	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		5.2	1		12/05/08 04:09	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		5.2	1		12/05/08 04:09	95-63-6	
1,3,5-Trimethylbenzene	ND ug/kg		5.2	1		12/05/08 04:09	108-67-8	
Vinyl acetate	ND ug/kg		104	1		12/05/08 04:09	108-05-4	
Vinyl chloride	ND ug/kg		5.2	1		12/05/08 04:09	75-01-4	
Xylene (Total)	ND ug/kg		10.4	1		12/05/08 04:09	1330-20-7	
Dibromofluoromethane (S)	108 %		80-124	1		12/05/08 04:09	1868-53-7	
Toluene-d8 (S)	98 %		58-145	1		12/05/08 04:09	2037-26-5	
4-Bromofluorobenzene (S)	101 %		61-131	1		12/05/08 04:09	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87							
Percent Moisture	<b>4.0 %</b>		0.10	1		12/05/08 16:45		

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

Page 9 of 19

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## ANALYTICAL RESULTS

Project: Michigan Meadows  
Pace Project No.: 5021301

Sample: MW-168S	Lab ID: 5021301004	Collected: 12/02/08 11:15	Received: 12/04/08 10:42	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		12/09/08 14:25	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		12/09/08 14:25	56-23-5	
Chloroform	ND	ug/L	5.0	1		12/09/08 14:25	67-66-3	
1,1-Dichloroethane	ND	ug/L	5.0	1		12/09/08 14:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		12/09/08 14:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		12/09/08 14:25	75-35-4	
cis-1,2-Dichloroethene	<b>79.5</b>	ug/L	5.0	1		12/09/08 14:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		12/09/08 14:25	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		12/09/08 14:25	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		12/09/08 14:25	75-09-2	
Naphthalene	ND	ug/L	5.0	1		12/09/08 14:25	91-20-3	
Tetrachloroethene	<b>102</b>	ug/L	5.0	1		12/09/08 14:25	127-18-4	
Toluene	ND	ug/L	5.0	1		12/09/08 14:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		12/09/08 14:25	71-55-6	
Trichloroethene	<b>18.8</b>	ug/L	5.0	1		12/09/08 14:25	79-01-6	
Vinyl chloride	<b>6.2</b>	ug/L	2.0	1		12/09/08 14:25	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		12/09/08 14:25	1330-20-7	
Dibromofluoromethane (S)	104 %		80-123	1		12/09/08 14:25	1868-53-7	
4-Bromofluorobenzene (S)	100 %		70-126	1		12/09/08 14:25	460-00-4	
Toluene-d8 (S)	97 %		80-116	1		12/09/08 14:25	2037-26-5	

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

Page 10 of 19

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## QUALITY CONTROL DATA

Project: Michigan Meadows

Pace Project No.: 5021301

QC Batch:	MSV/13181	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5030 Low
Associated Lab Samples:	5021301001, 5021301002, 5021301003		

METHOD BLANK: 241632                                  Matrix: Solid

Associated Lab Samples: 5021301001, 5021301002, 5021301003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	12/04/08 23:55	
1,1,1-Trichloroethane	ug/kg	ND	5.0	12/04/08 23:55	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	12/04/08 23:55	
1,1,2-Trichloroethane	ug/kg	ND	5.0	12/04/08 23:55	
1,1-Dichloroethane	ug/kg	ND	5.0	12/04/08 23:55	
1,1-Dichloroethene	ug/kg	ND	5.0	12/04/08 23:55	
1,1-Dichloropropene	ug/kg	ND	5.0	12/04/08 23:55	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	12/04/08 23:55	
1,2,3-Trichloropropane	ug/kg	ND	5.0	12/04/08 23:55	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	12/04/08 23:55	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	12/04/08 23:55	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	12/04/08 23:55	
1,2-Dichlorobenzene	ug/kg	ND	5.0	12/04/08 23:55	
1,2-Dichloroethane	ug/kg	ND	5.0	12/04/08 23:55	
1,2-Dichloropropane	ug/kg	ND	5.0	12/04/08 23:55	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	12/04/08 23:55	
1,3-Dichlorobenzene	ug/kg	ND	5.0	12/04/08 23:55	
1,3-Dichloropropane	ug/kg	ND	5.0	12/04/08 23:55	
1,4-Dichlorobenzene	ug/kg	ND	5.0	12/04/08 23:55	
2,2-Dichloropropane	ug/kg	ND	5.0	12/04/08 23:55	
2-Butanone (MEK)	ug/kg	ND	25.0	12/04/08 23:55	
2-Chlorotoluene	ug/kg	ND	5.0	12/04/08 23:55	
2-Hexanone	ug/kg	ND	100	12/04/08 23:55	
4-Chlorotoluene	ug/kg	ND	5.0	12/04/08 23:55	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	25.0	12/04/08 23:55	
Acetone	ug/kg	ND	100	12/04/08 23:55	
Acrolein	ug/kg	ND	100	12/04/08 23:55	
Acrylonitrile	ug/kg	ND	100	12/04/08 23:55	
Benzene	ug/kg	ND	5.0	12/04/08 23:55	
Bromobenzene	ug/kg	ND	5.0	12/04/08 23:55	
Bromochloromethane	ug/kg	ND	5.0	12/04/08 23:55	
Bromodichloromethane	ug/kg	ND	5.0	12/04/08 23:55	
Bromoform	ug/kg	ND	5.0	12/04/08 23:55	
Bromomethane	ug/kg	ND	5.0	12/04/08 23:55	
Carbon disulfide	ug/kg	ND	10.0	12/04/08 23:55	
Carbon tetrachloride	ug/kg	ND	5.0	12/04/08 23:55	
Chlorobenzene	ug/kg	ND	5.0	12/04/08 23:55	
Chloroethane	ug/kg	ND	5.0	12/04/08 23:55	
Chloroform	ug/kg	ND	5.0	12/04/08 23:55	
Chloromethane	ug/kg	ND	5.0	12/04/08 23:55	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	12/04/08 23:55	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	12/04/08 23:55	
Dibromochloromethane	ug/kg	ND	5.0	12/04/08 23:55	

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

Page 11 of 19

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## QUALITY CONTROL DATA

Project: Michigan Meadows

Pace Project No.: 5021301

METHOD BLANK: 241632

Matrix: Solid

Associated Lab Samples: 5021301001, 5021301002, 5021301003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/kg	ND	5.0	12/04/08 23:55	
Dichlorodifluoromethane	ug/kg	ND	5.0	12/04/08 23:55	
Ethyl methacrylate	ug/kg	ND	10.0	12/04/08 23:55	
Ethylbenzene	ug/kg	ND	5.0	12/04/08 23:55	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	12/04/08 23:55	
Iodomethane	ug/kg	ND	100	12/04/08 23:55	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	12/04/08 23:55	
Methyl-tert-butyl ether	ug/kg	ND	5.0	12/04/08 23:55	
Methylene chloride	ug/kg	ND	20.0	12/04/08 23:55	
n-Butylbenzene	ug/kg	ND	5.0	12/04/08 23:55	
n-Hexane	ug/kg	ND	5.0	12/04/08 23:55	
n-Propylbenzene	ug/kg	ND	5.0	12/04/08 23:55	
Naphthalene	ug/kg	ND	5.0	12/04/08 23:55	
p-Isopropyltoluene	ug/kg	ND	5.0	12/04/08 23:55	
sec-Butylbenzene	ug/kg	ND	5.0	12/04/08 23:55	
Styrene	ug/kg	ND	5.0	12/04/08 23:55	
tert-Butylbenzene	ug/kg	ND	5.0	12/04/08 23:55	
Tetrachloroethene	ug/kg	ND	5.0	12/04/08 23:55	
Toluene	ug/kg	ND	5.0	12/04/08 23:55	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	12/04/08 23:55	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	12/04/08 23:55	
trans-1,4-Dichloro-2-butene	ug/kg	ND	100	12/04/08 23:55	
Trichloroethene	ug/kg	ND	5.0	12/04/08 23:55	
Trichlorofluoromethane	ug/kg	ND	5.0	12/04/08 23:55	
Vinyl acetate	ug/kg	ND	100	12/04/08 23:55	
Vinyl chloride	ug/kg	ND	5.0	12/04/08 23:55	
Xylene (Total)	ug/kg	ND	10.0	12/04/08 23:55	
4-Bromofluorobenzene (S)	%	102	61-131	12/04/08 23:55	
Dibromofluoromethane (S)	%	108	80-124	12/04/08 23:55	
Toluene-d8 (S)	%	99	58-145	12/04/08 23:55	

LABORATORY CONTROL SAMPLE: 241633

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50	45.2	90	65-124	
1,1,1-Trichloroethane	ug/kg	50	49.6	99	61-135	
1,1,2,2-Tetrachloroethane	ug/kg	50	49.6	99	66-124	
1,1,2-Trichloroethane	ug/kg	50	47.1	94	74-127	
1,1-Dichloroethane	ug/kg	50	46.6	93	62-132	
1,1-Dichloroethene	ug/kg	50	47.7	95	61-123	
1,1-Dichloropropene	ug/kg	50	46.6	93	74-128	
1,2,3-Trichlorobenzene	ug/kg	50	47.5	95	60-125	
1,2,3-Trichloropropane	ug/kg	50	45.1	90	61-120	
1,2,4-Trichlorobenzene	ug/kg	50	46.6	93	58-126	
1,2,4-Trimethylbenzene	ug/kg	50	48.3	97	72-120	

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

Page 12 of 19

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## QUALITY CONTROL DATA

Project: Michigan Meadows

Pace Project No.: 5021301

LABORATORY CONTROL SAMPLE: 241633

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	50	46.3	93	74-119	
1,2-Dichlorobenzene	ug/kg	50	48.7	97	75-117	
1,2-Dichloroethane	ug/kg	50	49.8	100	62-135	
1,2-Dichloropropane	ug/kg	50	50.6	101	74-124	
1,3,5-Trimethylbenzene	ug/kg	50	49.4	99	73-122	
1,3-Dichlorobenzene	ug/kg	50	50.0	100	73-120	
1,3-Dichloropropane	ug/kg	50	51.1	102	71-122	
1,4-Dichlorobenzene	ug/kg	50	46.8	94	72-118	
2,2-Dichloropropane	ug/kg	50	45.7	91	53-136	
2-Butanone (MEK)	ug/kg	250	224	90	33-190	
2-Chlorotoluene	ug/kg	50	48.6	97	72-122	
2-Hexanone	ug/kg	250	236	95	44-168	
4-Chlorotoluene	ug/kg	50	47.8	96	72-120	
4-Methyl-2-pentanone (MIBK)	ug/kg	250	221	88	58-126	
Acetone	ug/kg	250	221	88	30-190	
Acrolein	ug/kg	1000	1620	162	30-190	
Acrylonitrile	ug/kg	1000	1020	102	65-129	
Benzene	ug/kg	50	49.3	99	76-123	
Bromobenzene	ug/kg	50	51.0	102	74-116	
Bromochloromethane	ug/kg	50	48.9	98	56-143	
Bromodichloromethane	ug/kg	50	48.4	97	67-123	
Bromoform	ug/kg	50	45.2	90	58-117	
Bromomethane	ug/kg	50	47.7	95	47-147	
Carbon disulfide	ug/kg	100	96.6	97	56-141	
Carbon tetrachloride	ug/kg	50	49.7	99	54-136	
Chlorobenzene	ug/kg	50	48.0	96	75-115	
Chloroethane	ug/kg	50	43.8	88	57-147	
Chloroform	ug/kg	50	48.9	98	74-123	
Chloromethane	ug/kg	50	44.6	89	31-155	
cis-1,2-Dichloroethene	ug/kg	50	50.4	101	76-119	
cis-1,3-Dichloropropene	ug/kg	50	43.8	88	56-110	
Dibromochloromethane	ug/kg	50	47.2	94	63-122	
Dibromomethane	ug/kg	50	50.4	101	70-127	
Dichlorodifluoromethane	ug/kg	50	40.1	80	30-170	
Ethyl methacrylate	ug/kg	50	46.8	94	58-126	
Ethylbenzene	ug/kg	50	51.0	102	78-121	
Hexachloro-1,3-butadiene	ug/kg	50	47.5	95	65-128	
Iodomethane	ug/kg	100	91.9J	92	38-173	
Isopropylbenzene (Cumene)	ug/kg	50	48.9	98	75-128	
Methyl-tert-butyl ether	ug/kg	100	106	106	59-142	
Methylene chloride	ug/kg	50	44.6	89	30-170	
n-Butylbenzene	ug/kg	50	48.7	97	70-123	
n-Hexane	ug/kg	50	52.2	104	76-143	
n-Propylbenzene	ug/kg	50	50.5	101	70-126	
Naphthalene	ug/kg	50	48.0	96	60-128	
p-Isopropyltoluene	ug/kg	50	46.2	92	65-125	
sec-Butylbenzene	ug/kg	50	51.0	102	72-125	
Styrene	ug/kg	50	50.7	101	75-118	

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

Page 13 of 19

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## QUALITY CONTROL DATA

Project: Michigan Meadows

Pace Project No.: 5021301

LABORATORY CONTROL SAMPLE: 241633

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/kg	50	46.2	92	61-114	
Tetrachloroethene	ug/kg	50	46.7	93	63-117	
Toluene	ug/kg	50	47.3	95	72-123	
trans-1,2-Dichloroethene	ug/kg	50	58.9	118	70-122	
trans-1,3-Dichloropropene	ug/kg	50	42.1	84	55-107	
trans-1,4-Dichloro-2-butene	ug/kg	50	36.7J	73	49-127	
Trichloroethene	ug/kg	50	51.7	103	74-121	
Trichlorofluoromethane	ug/kg	50	40.5	81	55-156	
Vinyl acetate	ug/kg	200	167	83	46-127	
Vinyl chloride	ug/kg	50	41.5	83	50-146	
Xylene (Total)	ug/kg	150	154	103	77-120	
4-Bromofluorobenzene (S)	%			101	61-131	
Dibromofluoromethane (S)	%			99	80-124	
Toluene-d8 (S)	%			98	58-145	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 241634 241635

Parameter	Units	5021301001		MSD		MS Result	MS % Rec	MSD Result	MSD % Rec	% Rec Limits	Max	
		Spike	Conc.	Spike	Conc.						RPD	RPD
1,1,1,2-Tetrachloroethane	ug/kg	ND	56.8	56.8	39.7	40.8	70	72	20-133	3	20	
1,1,1-Trichloroethane	ug/kg	ND	56.8	56.8	46.6	48.1	82	85	27-142	3	20	
1,1,2,2-Tetrachloroethane	ug/kg	ND	56.8	56.8	40.6	46.0	71	81	20-159	12	20	
1,1,2-Trichloroethane	ug/kg	ND	56.8	56.8	41.2	44.6	73	78	20-155	8	20	
1,1-Dichloroethane	ug/kg	ND	56.8	56.8	43.7	45.3	77	80	31-141	4	20	
1,1-Dichloroethene	ug/kg	ND	56.8	56.8	45.6	47.1	80	83	23-132	3	20	
1,1-Dichloropropene	ug/kg	ND	56.8	56.8	43.8	44.1	77	78	20-146	1	20	
1,2,3-Trichlorobenzene	ug/kg	ND	56.8	56.8	19.5	21.8	34	38	20-140	11	20	
1,2,3-Trichloropropane	ug/kg	ND	56.8	56.8	35.7	38.7	63	68	20-153	8	20	
1,2,4-Trichlorobenzene	ug/kg	ND	56.8	56.8	22.8	24.5	40	43	20-120	7	20	
1,2,4-Trimethylbenzene	ug/kg	ND	56.8	56.8	41.8	38.7	71	66	20-156	8	20	
1,2-Dibromoethane (EDB)	ug/kg	ND	56.8	56.8	38.7	41.7	68	73	20-143	7	20	
1,2-Dichlorobenzene	ug/kg	ND	56.8	56.8	33.5	33.1	59	58	20-133	1	20	
1,2-Dichloroethane	ug/kg	ND	56.8	56.8	43.8	46.9	77	83	30-143	7	20	
1,2-Dichloropropane	ug/kg	ND	56.8	56.8	45.7	48.5	80	85	30-140	6	20	
1,3,5-Trimethylbenzene	ug/kg	ND	56.8	56.8	41.6	39.9	72	69	20-143	4	20	
1,3-Dichlorobenzene	ug/kg	ND	56.8	56.8	35.7	35.7	63	63	20-136	0	20	
1,3-Dichloropropane	ug/kg	ND	56.8	56.8	43.3	47.9	76	84	30-144	10	20	
1,4-Dichlorobenzene	ug/kg	ND	56.8	56.8	33.4	33.6	59	59	30-135	1	20	
2,2-Dichloropropane	ug/kg	ND	56.8	56.8	44.3	45.4	78	80	30-143	3	20	
2-Butanone (MEK)	ug/kg	ND	284	284	199	240	70	84	30-190	19	20	
2-Chlorotoluene	ug/kg	ND	56.8	56.8	39.5	38.6	69	68	30-170	2	20	
2-Hexanone	ug/kg	ND	284	284	198	247	70	87	30-170	22	20	R1
4-Chlorotoluene	ug/kg	ND	56.8	56.8	37.9	37.1	67	65	30-143	2	20	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	284	284	180	204	63	72	30-144	13	20	
Acetone	ug/kg	ND	284	284	244	311	86	110	30-180	24	20	R1
Acrolein	ug/kg	ND	1140	1140	1330	1460	117	129	30-180	10	20	
Acrylonitrile	ug/kg	ND	1140	1140	789	860	69	76	30-141	9	20	

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

Page 14 of 19

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## QUALITY CONTROL DATA

Project: Michigan Meadows

Pace Project No.: 5021301

Parameter	Units	5021301001		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max	
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	Max RPD				RPD	Qual
Benzene	ug/kg	ND	56.8	56.8	46.1	47.5	81	84	50-135	3	20	
Bromobenzene	ug/kg	ND	56.8	56.8	38.3	39.9	67	70	30-125	4	20	
Bromoform	ug/kg	ND	56.8	56.8	41.6	45.4	73	80	30-159	9	20	
Bromochloromethane	ug/kg	ND	56.8	56.8	41.4	43.9	73	77	30-141	6	20	
Bromodichloromethane	ug/kg	ND	56.8	56.8	36.1	38.4	64	68	30-135	6	20	
Bromomethane	ug/kg	ND	56.8	56.8	42.8	46.1	75	81	30-137	7	20	
Carbon disulfide	ug/kg	ND	114	114	92.6	95.0	81	84	30-156	3	20	
Carbon tetrachloride	ug/kg	ND	56.8	56.8	47.0	46.8	83	82	30-130	0	20	
Chlorobenzene	ug/kg	ND	56.8	56.8	40.9	41.7	72	73	30-137	2	20	
Chloroethane	ug/kg	ND	56.8	56.8	43.9	50.1	77	88	35-143	13	20	
Chloroform	ug/kg	ND	56.8	56.8	45.4	47.3	80	83	30-136	4	20	
Chloromethane	ug/kg	ND	56.8	56.8	41.0	43.5	72	77	28-134	6	20	
cis-1,2-Dichloroethene	ug/kg	ND	56.8	56.8	46.1	48.5	81	85	30-141	5	20	
cis-1,3-Dichloropropene	ug/kg	ND	56.8	56.8	37.7	41.5	66	73	30-126	10	20	
Dibromochloromethane	ug/kg	ND	56.8	56.8	38.8	42.7	68	75	30-129	10	20	
Dibromomethane	ug/kg	ND	56.8	56.8	42.7	45.9	75	81	30-153	7	20	
Dichlorodifluoromethane	ug/kg	ND	56.8	56.8	39.0	40.1	69	71	30-150	3	20	
Ethyl methacrylate	ug/kg	ND	56.8	56.8	10.7J	17.7	19	31	30-170	20	M0	
Ethylbenzene	ug/kg	ND	56.8	56.8	45.4	45.1	78	78	50-150	1	20	
Hexachloro-1,3-butadiene	ug/kg	ND	56.8	56.8	31.2	28.7	55	51	30-138	8	20	
Iodomethane	ug/kg	ND	114	114	82.2J	87.6J	72	77	30-180		20	
Isopropylbenzene (Cumene)	ug/kg	ND	56.8	56.8	40.5	39.7	70	69	50-150	2	20	
Methyl-tert-butyl ether	ug/kg	ND	114	114	93.1	99.6	82	88	40-149	7	20	
Methylene chloride	ug/kg	ND	56.8	56.8	39.0	41.4	69	73	30-163	6	20	
n-Butylbenzene	ug/kg	ND	56.8	56.8	36.7	35.3	65	62	40-152	4	20	
n-Hexane	ug/kg	ND	56.8	56.8	48.0	43.7	84	77	40-155	9	20	
n-Propylbenzene	ug/kg	ND	56.8	56.8	43.2	40.6	75	71	40-170	6	20	
Naphthalene	ug/kg	ND	56.8	56.8	37.1	37.2	65	65	50-128	0	20	
p-Isopropyltoluene	ug/kg	ND	56.8	56.8	39.5	37.7	69	66	40-167	4	20	
sec-Butylbenzene	ug/kg	ND	56.8	56.8	42.8	39.0	75	69	40-168	9	20	
Styrene	ug/kg	ND	56.8	56.8	41.0	42.4	72	75	30-141	3	20	
tert-Butylbenzene	ug/kg	ND	56.8	56.8	39.5	37.7	69	66	40-144	4	20	
Tetrachloroethene	ug/kg	ND	56.8	56.8	41.4	41.4	73	73	40-155	0	20	
Toluene	ug/kg	ND	56.8	56.8	43.5	44.5	77	78	50-149	2	20	
trans-1,2-Dichloroethene	ug/kg	ND	56.8	56.8	55.7	56.8	98	100	40-140	2	20	
trans-1,3-Dichloropropene	ug/kg	ND	56.8	56.8	35.9	38.8	63	68	40-130	8	20	
trans-1,4-Dichloro-2-butene	ug/kg	ND	56.8	56.8	29.1J	34.9J	51	61	30-150		20	
Trichloroethene	ug/kg	ND	56.8	56.8	47.1	48.2	83	85	40-153	2	20	
Trichlorofluoromethane	ug/kg	ND	56.8	56.8	40.3	40.5	71	71	43-140	0	20	
Vinyl acetate	ug/kg	ND	227	227	ND	5.8J	1	3	30-120	20	M0	
Vinyl chloride	ug/kg	ND	56.8	56.8	40.0	42.5	70	75	36-137	6	20	
Xylene (Total)	ug/kg	ND	170	170	132	134	78	79	50-143	1	20	
4-Bromofluorobenzene (S)	%						101	100	61-131		20	
Dibromofluoromethane (S)	%						98	95	80-124		20	
Toluene-d8 (S)	%						98	98	58-145		20	

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

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Page 15 of 19

## QUALITY CONTROL DATA

Project: Michigan Meadows

Pace Project No.: 5021301

QC Batch: PMST/3195 Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 5021301001, 5021301002, 5021301003

SAMPLE DUPLICATE: 241857

Parameter	Units	5021262001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.9	22.8	1	5	

SAMPLE DUPLICATE: 241858

Parameter	Units	5021305002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.6	6.7	3	5	

SAMPLE DUPLICATE: 241859

Parameter	Units	5021410001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4.7	4.6	3	5	

## QUALITY CONTROL DATA

Project: Michigan Meadows

Pace Project No.: 5021301

QC Batch:	MSV/13279	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	5021301004		

METHOD BLANK:	243280	Matrix: Water
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Associated Lab Samples: 5021301004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	12/09/08 10:20	
1,1-Dichloroethane	ug/L	ND	5.0	12/09/08 10:20	
1,1-Dichloroethene	ug/L	ND	5.0	12/09/08 10:20	
1,2-Dichloroethane	ug/L	ND	5.0	12/09/08 10:20	
Benzene	ug/L	ND	5.0	12/09/08 10:20	
Carbon tetrachloride	ug/L	ND	5.0	12/09/08 10:20	
Chloroform	ug/L	ND	5.0	12/09/08 10:20	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/09/08 10:20	
Ethylbenzene	ug/L	ND	5.0	12/09/08 10:20	
Methylene chloride	ug/L	ND	5.0	12/09/08 10:20	
Naphthalene	ug/L	ND	5.0	12/09/08 10:20	
Tetrachloroethene	ug/L	ND	5.0	12/09/08 10:20	
Toluene	ug/L	ND	5.0	12/09/08 10:20	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/09/08 10:20	
Trichloroethene	ug/L	ND	5.0	12/09/08 10:20	
Vinyl chloride	ug/L	ND	2.0	12/09/08 10:20	
Xylene (Total)	ug/L	ND	10.0	12/09/08 10:20	
4-Bromofluorobenzene (S)	%	102	70-126	12/09/08 10:20	
Dibromofluoromethane (S)	%	103	80-123	12/09/08 10:20	
Toluene-d8 (S)	%	98	80-116	12/09/08 10:20	

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LABORATORY CONTROL SAMPLE: 243281

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	44.1	88	69-136	
1,1-Dichloroethane	ug/L	50	49.3	99	67-133	
1,1-Dichloroethene	ug/L	50	49.8	100	63-128	
1,2-Dichloroethane	ug/L	50	53.5	107	69-139	
Benzene	ug/L	50	51.1	102	78-127	
Carbon tetrachloride	ug/L	50	41.9	84	62-143	
Chloroform	ug/L	50	50.7	101	74-131	
cis-1,2-Dichloroethene	ug/L	50	49.2	98	74-128	
Ethylbenzene	ug/L	50	50.3	101	81-126	
Methylene chloride	ug/L	50	50.7	101	32-164	
Naphthalene	ug/L	50	50.1	100	61-135	
Tetrachloroethene	ug/L	50	37.9	76	60-119	
Toluene	ug/L	50	49.9	100	75-129	
trans-1,2-Dichloroethene	ug/L	50	50.7	101	71-126	
Trichloroethene	ug/L	50	52.4	105	74-130	
Vinyl chloride	ug/L	50	45.7	91	55-141	
Xylene (Total)	ug/L	150	153	102	76-132	

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

Page 17 of 19

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## QUALITY CONTROL DATA

Project: Michigan Meadows

Pace Project No.: 5021301

**LABORATORY CONTROL SAMPLE:** 243281

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			98	70-126	
Dibromofluoromethane (S)	%			101	80-123	
Toluene-d8 (S)	%			99	80-116	

**MATRIX SPIKE SAMPLE:** 243282

Parameter	Units	5021324006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	424	50	704	560	64-143	M0
1,1-Dichloroethane	ug/L	243	50	290	93	68-139	
1,1-Dichloroethene	ug/L	92.2	50	149	113	55-140	
1,2-Dichloroethane	ug/L	ND	50	56.0	112	63-148	
Benzene	ug/L	ND	50	51.5	103	63-141	
Carbon tetrachloride	ug/L	ND	50	53.6	107	54-145	
Chloroform	ug/L	ND	50	52.5	103	67-134	
cis-1,2-Dichloroethene	ug/L	110	50	160	100	65-132	
Ethylbenzene	ug/L	ND	50	48.7	97	44-151	
Methylene chloride	ug/L	ND	50	48.5	97	46-154	
Naphthalene	ug/L	ND	50	48.3	97	44-138	
Tetrachloroethene	ug/L	ND	50	37.4	75	25-146	
Toluene	ug/L	43.6	50	92.5	98	59-142	
trans-1,2-Dichloroethene	ug/L	ND	50	55.6	105	60-137	
Trichloroethene	ug/L	54.3	50	110	111	61-137	
Vinyl chloride	ug/L	12.3	50	63.5	102	51-144	
Xylene (Total)	ug/L	ND	150	149	99	44-152	
4-Bromofluorobenzene (S)	%				101	70-126	
Dibromofluoromethane (S)	%				100	80-123	
Toluene-d8 (S)	%				98	80-116	

Date: 12/15/2008 02:58 PM

## REPORT OF LABORATORY ANALYSIS

Page 18 of 19

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## QUALIFIERS

Project: Michigan Meadows

Pace Project No.: 5021301

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

### ANALYTE QUALIFIERS

M0      Matrix spike recovery was outside laboratory control limits.

R1      RPD value was outside control limits.



Page Analytical

Analytica

**Section A**

## **Section A**

### Required Client Information:

Section B

## **Section B**

### **Required Project Information**

160

Subject Information

**Important Note:** By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



**CHAIN-OF-CUSTODY / Analytical Request Document**

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

## Sample Condition Upon Receipt

*Pace Analytical*Client Name: MuncellProject # 5021301

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
 Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals Intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 123456 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 0.9°C  
 Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining  
 contents: 12/2/08 -2-

Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix:	<u>SL</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):	<u>N1A</u>		

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Manager Review:

P3

Date: 12/2/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

## Sample Condition Upon Receipt

*Pace Analytical*Client Name MundellProject # 5021301

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_  
 Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other *foam*

Thermometer Used 123456 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Cooler Temperature 0.9°C Biological Tissue is Frozen: Yes  No Comments: Date and Initials of person/examining contents: 12-4-08 ke

Temp should be above freezing to 6°C	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
-Includes date/time/ID/Analysis Matrix:	<i>ST</i>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed      Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17.
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	18. <i>VOA has headspace 7mm</i>
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	19.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	20.
Pace Trip Blank Lot # (if purchased):		

## Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted:

Date/Time:

Comments/ Resolution: *Add to project rec'd on 12/02/08 per Leena Lothe via phone  
12/3/08!*

Project Manager Review: *PB*Date: 12-4-08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

December 30, 2008

Leena Lothe  
Mundell & Associates, Inc.  
110 South Downey Avenue  
Indianapolis, IN 46219

RE: Project: Michigan Meadow  
Pace Project No.: 5022032

Dear Leena Lothe:

Enclosed are the analytical results for sample(s) received by the laboratory on December 19, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Phaedra Zucksworth*

Phaedra Zucksworth

phaedra.zucksworth@pacelabs.com  
Project Manager

Illinois/NELAC Certification #: 100418  
Indiana Certification #: C-49-06  
Kansas Certification #: E-10247  
Kentucky Certification #: 0042  
Ohio VAP: CL0065  
Pennsylvania: 68-00791  
West Virginia Certification #: 330

Enclosures

#### REPORT OF LABORATORY ANALYSIS

Page 1 of 12

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## SAMPLE SUMMARY

Project: Michigan Meadow  
Pace Project No.: 5022032

Lab ID	Sample ID	Matrix	Date Collected	Date Received
5022032001	MMW-14D (6')	Solid	12/10/08 12:05	12/19/08 14:27

## REPORT OF LABORATORY ANALYSIS

Page 2 of 12

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## SAMPLE ANALYTE COUNT

Project: Michigan Meadow  
Pace Project No.: 5022032

Lab ID	Sample ID	Method	Analysts	Analytics Reported
5022032001	MMW-14D (6')	ASTM D2974-87	RAK	1
		EPA 8260	ALA	73

## REPORT OF LABORATORY ANALYSIS

Page 3 of 12

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## ANALYTICAL RESULTS

Project: Michigan Meadow  
Pace Project No.: 5022032

Sample: MMW-14D (6') Lab ID: 5022032001 Collected: 12/10/08 12:05 Received: 12/19/08 14:27 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5030 Low Level</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		121	1		12/24/08 15:24	67-64-1	
Acrolein	ND ug/kg		121	1		12/24/08 15:24	107-02-8	
Acrylonitrile	ND ug/kg		121	1		12/24/08 15:24	107-13-1	
Benzene	ND ug/kg		6.0	1		12/24/08 15:24	71-43-2	
Bromobenzene	ND ug/kg		6.0	1		12/24/08 15:24	108-86-1	
Bromochloromethane	ND ug/kg		6.0	1		12/24/08 15:24	74-97-5	
Bromodichloromethane	ND ug/kg		6.0	1		12/24/08 15:24	75-27-4	
Bromoform	ND ug/kg		6.0	1		12/24/08 15:24	75-25-2	
Bromomethane	ND ug/kg		6.0	1		12/24/08 15:24	74-83-9	
2-Butanone (MEK)	ND ug/kg		30.2	1		12/24/08 15:24	78-93-3	
n-Butylbenzene	ND ug/kg		6.0	1		12/24/08 15:24	104-51-8	
sec-Butylbenzene	ND ug/kg		6.0	1		12/24/08 15:24	135-98-8	
tert-Butylbenzene	ND ug/kg		6.0	1		12/24/08 15:24	98-06-6	
Carbon disulfide	ND ug/kg		12.1	1		12/24/08 15:24	75-15-0	
Carbon tetrachloride	ND ug/kg		6.0	1		12/24/08 15:24	56-23-5	
Chlorobenzene	ND ug/kg		6.0	1		12/24/08 15:24	108-90-7	
Chloroethane	ND ug/kg		6.0	1		12/24/08 15:24	75-00-3	
Chloroform	ND ug/kg		6.0	1		12/24/08 15:24	67-66-3	
Chloromethane	ND ug/kg		6.0	1		12/24/08 15:24	74-87-3	
2-Chlorotoluene	ND ug/kg		6.0	1		12/24/08 15:24	95-49-8	
4-Chlorotoluene	ND ug/kg		6.0	1		12/24/08 15:24	106-43-4	
Dibromochloromethane	ND ug/kg		6.0	1		12/24/08 15:24	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		6.0	1		12/24/08 15:24	106-93-4	
Dibromomethane	ND ug/kg		6.0	1		12/24/08 15:24	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		6.0	1		12/24/08 15:24	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		6.0	1		12/24/08 15:24	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		6.0	1		12/24/08 15:24	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/kg		121	1		12/24/08 15:24	110-57-6	
Dichlorodifluoromethane	ND ug/kg		6.0	1		12/24/08 15:24	75-71-8	
1,1-Dichloroethane	ND ug/kg		6.0	1		12/24/08 15:24	75-34-3	
1,2-Dichloroethane	ND ug/kg		6.0	1		12/24/08 15:24	107-06-2	
1,1-Dichloroethene	ND ug/kg		6.0	1		12/24/08 15:24	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		6.0	1		12/24/08 15:24	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		6.0	1		12/24/08 15:24	156-60-5	
1,2-Dichloropropane	ND ug/kg		6.0	1		12/24/08 15:24	78-87-5	
1,3-Dichloropropane	ND ug/kg		6.0	1		12/24/08 15:24	142-28-9	
2,2-Dichloropropane	ND ug/kg		6.0	1		12/24/08 15:24	594-20-7	
1,1-Dichloropropene	ND ug/kg		6.0	1		12/24/08 15:24	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		6.0	1		12/24/08 15:24	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		6.0	1		12/24/08 15:24	10061-02-6	
Ethylbenzene	ND ug/kg		6.0	1		12/24/08 15:24	100-41-4	
Ethyl methacrylate	ND ug/kg		12.1	1		12/24/08 15:24	97-63-2	
Hexachloro-1,3-butadiene	ND ug/kg		6.0	1		12/24/08 15:24	87-68-3	
n-Hexane	ND ug/kg		6.0	1		12/24/08 15:24	110-54-3	
2-Hexanone	ND ug/kg		121	1		12/24/08 15:24	591-78-6	
Iodomethane	ND ug/kg		121	1		12/24/08 15:24	74-88-4	

Date: 12/30/2008 09:45 AM

## REPORT OF LABORATORY ANALYSIS

Page 4 of 12

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## ANALYTICAL RESULTS

Project: Michigan Meadow  
Pace Project No.: 5022032

Sample: MMW-14D (6') Lab ID: 5022032001 Collected: 12/10/08 12:05 Received: 12/19/08 14:27 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5030 Low Level</b>	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND ug/kg		6.0	1		12/24/08 15:24	98-82-8	
p-Isopropyltoluene	ND ug/kg		6.0	1		12/24/08 15:24	99-87-6	
Methylene chloride	ND ug/kg		24.1	1		12/24/08 15:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		30.2	1		12/24/08 15:24	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		6.0	1		12/24/08 15:24	1634-04-4	
Naphthalene	ND ug/kg		6.0	1		12/24/08 15:24	91-20-3	
n-Propylbenzene	ND ug/kg		6.0	1		12/24/08 15:24	103-65-1	
Styrene	ND ug/kg		6.0	1		12/24/08 15:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		6.0	1		12/24/08 15:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		6.0	1		12/24/08 15:24	79-34-5	
Tetrachloroethene	ND ug/kg		6.0	1		12/24/08 15:24	127-18-4	
Toluene	ND ug/kg		6.0	1		12/24/08 15:24	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		6.0	1		12/24/08 15:24	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		6.0	1		12/24/08 15:24	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		6.0	1		12/24/08 15:24	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		6.0	1		12/24/08 15:24	79-00-5	
Trichloroethene	ND ug/kg		6.0	1		12/24/08 15:24	79-01-6	
Trichlorofluoromethane	ND ug/kg		6.0	1		12/24/08 15:24	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		6.0	1		12/24/08 15:24	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		6.0	1		12/24/08 15:24	95-63-6	
1,3,5-Trimethylbenzene	ND ug/kg		6.0	1		12/24/08 15:24	108-67-8	
Vinyl acetate	ND ug/kg		121	1		12/24/08 15:24	108-05-4	
Vinyl chloride	ND ug/kg		6.0	1		12/24/08 15:24	75-01-4	
Xylene (Total)	ND ug/kg		12.1	1		12/24/08 15:24	1330-20-7	
Dibromofluoromethane (S)	109 %		80-124	1		12/24/08 15:24	1868-53-7	
Toluene-d8 (S)	99 %		58-145	1		12/24/08 15:24	2037-26-5	
4-Bromofluorobenzene (S)	102 %		61-131	1		12/24/08 15:24	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87							
Percent Moisture	<b>17.1 %</b>		0.10	1		12/26/08 17:09		

Date: 12/30/2008 09:45 AM

## REPORT OF LABORATORY ANALYSIS

Page 5 of 12

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## QUALITY CONTROL DATA

Project: Michigan Meadow

Pace Project No.: 5022032

QC Batch:	MSV/13648	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5030 Low
Associated Lab Samples:	5022032001		

METHOD BLANK: 250361                                  Matrix: Solid

Associated Lab Samples: 5022032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	12/24/08 12:57	
1,1,1-Trichloroethane	ug/kg	ND	5.0	12/24/08 12:57	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	12/24/08 12:57	
1,1,2-Trichloroethane	ug/kg	ND	5.0	12/24/08 12:57	
1,1-Dichloroethane	ug/kg	ND	5.0	12/24/08 12:57	
1,1-Dichloroethene	ug/kg	ND	5.0	12/24/08 12:57	
1,1-Dichloropropene	ug/kg	ND	5.0	12/24/08 12:57	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	12/24/08 12:57	
1,2,3-Trichloropropane	ug/kg	ND	5.0	12/24/08 12:57	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	12/24/08 12:57	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	12/24/08 12:57	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	12/24/08 12:57	
1,2-Dichlorobenzene	ug/kg	ND	5.0	12/24/08 12:57	
1,2-Dichloroethane	ug/kg	ND	5.0	12/24/08 12:57	
1,2-Dichloropropane	ug/kg	ND	5.0	12/24/08 12:57	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	12/24/08 12:57	
1,3-Dichlorobenzene	ug/kg	ND	5.0	12/24/08 12:57	
1,3-Dichloropropane	ug/kg	ND	5.0	12/24/08 12:57	
1,4-Dichlorobenzene	ug/kg	ND	5.0	12/24/08 12:57	
2,2-Dichloropropane	ug/kg	ND	5.0	12/24/08 12:57	
2-Butanone (MEK)	ug/kg	ND	25.0	12/24/08 12:57	
2-Chlorotoluene	ug/kg	ND	5.0	12/24/08 12:57	
2-Hexanone	ug/kg	ND	100	12/24/08 12:57	
4-Chlorotoluene	ug/kg	ND	5.0	12/24/08 12:57	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	25.0	12/24/08 12:57	
Acetone	ug/kg	ND	100	12/24/08 12:57	
Acrolein	ug/kg	ND	100	12/24/08 12:57	
Acrylonitrile	ug/kg	ND	100	12/24/08 12:57	
Benzene	ug/kg	ND	5.0	12/24/08 12:57	
Bromobenzene	ug/kg	ND	5.0	12/24/08 12:57	
Bromochloromethane	ug/kg	ND	5.0	12/24/08 12:57	
Bromodichloromethane	ug/kg	ND	5.0	12/24/08 12:57	
Bromoform	ug/kg	ND	5.0	12/24/08 12:57	
Bromomethane	ug/kg	ND	5.0	12/24/08 12:57	
Carbon disulfide	ug/kg	ND	10.0	12/24/08 12:57	
Carbon tetrachloride	ug/kg	ND	5.0	12/24/08 12:57	
Chlorobenzene	ug/kg	ND	5.0	12/24/08 12:57	
Chloroethane	ug/kg	ND	5.0	12/24/08 12:57	
Chloroform	ug/kg	ND	5.0	12/24/08 12:57	
Chloromethane	ug/kg	ND	5.0	12/24/08 12:57	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	12/24/08 12:57	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	12/24/08 12:57	
Dibromochloromethane	ug/kg	ND	5.0	12/24/08 12:57	

Date: 12/30/2008 09:45 AM

## REPORT OF LABORATORY ANALYSIS

Page 6 of 12

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## QUALITY CONTROL DATA

Project: Michigan Meadow

Pace Project No.: 5022032

METHOD BLANK: 250361

Matrix: Solid

Associated Lab Samples: 5022032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/kg	ND	5.0	12/24/08 12:57	
Dichlorodifluoromethane	ug/kg	ND	5.0	12/24/08 12:57	
Ethyl methacrylate	ug/kg	ND	10.0	12/24/08 12:57	
Ethylbenzene	ug/kg	ND	5.0	12/24/08 12:57	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	12/24/08 12:57	
Iodomethane	ug/kg	ND	100	12/24/08 12:57	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	12/24/08 12:57	
Methyl-tert-butyl ether	ug/kg	ND	5.0	12/24/08 12:57	
Methylene chloride	ug/kg	ND	20.0	12/24/08 12:57	
n-Butylbenzene	ug/kg	ND	5.0	12/24/08 12:57	
n-Hexane	ug/kg	ND	5.0	12/24/08 12:57	
n-Propylbenzene	ug/kg	ND	5.0	12/24/08 12:57	
Naphthalene	ug/kg	ND	5.0	12/24/08 12:57	
p-Isopropyltoluene	ug/kg	ND	5.0	12/24/08 12:57	
sec-Butylbenzene	ug/kg	ND	5.0	12/24/08 12:57	
Styrene	ug/kg	ND	5.0	12/24/08 12:57	
tert-Butylbenzene	ug/kg	ND	5.0	12/24/08 12:57	
Tetrachloroethene	ug/kg	ND	5.0	12/24/08 12:57	
Toluene	ug/kg	ND	5.0	12/24/08 12:57	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	12/24/08 12:57	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	12/24/08 12:57	
trans-1,4-Dichloro-2-butene	ug/kg	ND	100	12/24/08 12:57	
Trichloroethene	ug/kg	ND	5.0	12/24/08 12:57	
Trichlorofluoromethane	ug/kg	ND	5.0	12/24/08 12:57	
Vinyl acetate	ug/kg	ND	100	12/24/08 12:57	
Vinyl chloride	ug/kg	ND	5.0	12/24/08 12:57	
Xylene (Total)	ug/kg	ND	10.0	12/24/08 12:57	
4-Bromofluorobenzene (S)	%	99	61-131	12/24/08 12:57	
Dibromofluoromethane (S)	%	104	80-124	12/24/08 12:57	
Toluene-d8 (S)	%	99	58-145	12/24/08 12:57	

LABORATORY CONTROL SAMPLE: 250362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50	52.6	105	65-124	
1,1,1-Trichloroethane	ug/kg	50	52.8	106	61-135	
1,1,2,2-Tetrachloroethane	ug/kg	50	49.4	99	66-124	
1,1,2-Trichloroethane	ug/kg	50	52.0	104	74-127	
1,1-Dichloroethane	ug/kg	50	51.0	102	62-132	
1,1-Dichloroethene	ug/kg	50	51.6	103	61-123	
1,1-Dichloropropene	ug/kg	50	53.9	108	74-128	
1,2,3-Trichlorobenzene	ug/kg	50	52.1	104	60-125	
1,2,3-Trichloropropane	ug/kg	50	48.6	97	61-120	
1,2,4-Trichlorobenzene	ug/kg	50	48.8	98	58-126	
1,2,4-Trimethylbenzene	ug/kg	50	52.0	104	72-120	

Date: 12/30/2008 09:45 AM

## REPORT OF LABORATORY ANALYSIS

Page 7 of 12

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## QUALITY CONTROL DATA

Project: Michigan Meadow

Pace Project No.: 5022032

LABORATORY CONTROL SAMPLE: 250362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	50	52.8	106	74-119	
1,2-Dichlorobenzene	ug/kg	50	50.2	100	75-117	
1,2-Dichloroethane	ug/kg	50	53.2	106	62-135	
1,2-Dichloropropane	ug/kg	50	50.3	101	74-124	
1,3,5-Trimethylbenzene	ug/kg	50	51.3	103	73-122	
1,3-Dichlorobenzene	ug/kg	50	55.1	110	73-120	
1,3-Dichloropropane	ug/kg	50	52.6	105	71-122	
1,4-Dichlorobenzene	ug/kg	50	49.9	100	72-118	
2,2-Dichloropropane	ug/kg	50	46.2	92	53-136	
2-Butanone (MEK)	ug/kg	250	401	160	33-190	
2-Chlorotoluene	ug/kg	50	49.6	99	72-122	
2-Hexanone	ug/kg	250	360	144	44-168	
4-Chlorotoluene	ug/kg	50	50.6	101	72-120	
4-Methyl-2-pentanone (MIBK)	ug/kg	250	248	99	58-126	
Acetone	ug/kg	250	579	232	30-190 LO	
Acrolein	ug/kg	1000	1780	178	30-190	
Acrylonitrile	ug/kg	1000	1200	120	65-129	
Benzene	ug/kg	50	54.1	108	76-123	
Bromobenzene	ug/kg	50	49.3	99	74-116	
Bromochloromethane	ug/kg	50	50.3	101	56-143	
Bromodichloromethane	ug/kg	50	51.7	103	67-123	
Bromoform	ug/kg	50	54.0	108	58-117	
Bromomethane	ug/kg	50	41.1	82	47-147	
Carbon disulfide	ug/kg	100	127	127	56-141	
Carbon tetrachloride	ug/kg	50	55.1	110	54-136	
Chlorobenzene	ug/kg	50	51.0	102	75-115	
Chloroethane	ug/kg	50	47.7	95	57-147	
Chloroform	ug/kg	50	49.6	99	74-123	
Chloromethane	ug/kg	50	47.2	94	31-155	
cis-1,2-Dichloroethene	ug/kg	50	52.4	105	76-119	
cis-1,3-Dichloropropene	ug/kg	50	51.4	103	56-110	
Dibromochloromethane	ug/kg	50	54.5	109	63-122	
Dibromomethane	ug/kg	50	51.7	103	70-127	
Dichlorodifluoromethane	ug/kg	50	59.2	118	30-170	
Ethyl methacrylate	ug/kg	50	50.3	101	58-126	
Ethylbenzene	ug/kg	50	49.1	98	78-121	
Hexachloro-1,3-butadiene	ug/kg	50	50.2	100	65-128	
Iodomethane	ug/kg	100	109	109	38-173	
Isopropylbenzene (Cumene)	ug/kg	50	51.6	103	75-128	
Methyl-tert-butyl ether	ug/kg	100	98.9	99	59-142	
Methylene chloride	ug/kg	50	51.2	102	30-170	
n-Butylbenzene	ug/kg	50	53.4	107	70-123	
n-Hexane	ug/kg	50	59.7	119	76-143	
n-Propylbenzene	ug/kg	50	50.9	102	70-126	
Naphthalene	ug/kg	50	53.2	106	60-128	
p-Isopropyltoluene	ug/kg	50	47.9	96	65-125	
sec-Butylbenzene	ug/kg	50	50.2	100	72-125	
Styrene	ug/kg	50	49.6	99	75-118	

Date: 12/30/2008 09:45 AM

## REPORT OF LABORATORY ANALYSIS

Page 8 of 12

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## QUALITY CONTROL DATA

Project: Michigan Meadow

Pace Project No.: 5022032

LABORATORY CONTROL SAMPLE: 250362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/kg	50	47.9	96	61-114	
Tetrachloroethene	ug/kg	50	46.3	93	63-117	
Toluene	ug/kg	50	49.3	99	72-123	
trans-1,2-Dichloroethene	ug/kg	50	55.3	111	70-122	
trans-1,3-Dichloropropene	ug/kg	50	47.3	95	55-107	
trans-1,4-Dichloro-2-butene	ug/kg	50	46.8J	94	49-127	
Trichloroethene	ug/kg	50	53.4	107	74-121	
Trichlorofluoromethane	ug/kg	50	50.1	100	55-156	
Vinyl acetate	ug/kg	200	184	92	46-127	
Vinyl chloride	ug/kg	50	50.2	100	50-146	
Xylene (Total)	ug/kg	150	150	100	77-120	
4-Bromofluorobenzene (S)	%			100	61-131	
Dibromofluoromethane (S)	%			101	80-124	
Toluene-d8 (S)	%			99	58-145	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 250363 250364

Parameter	Units	5021837001		MSD		MS Result	MS % Rec	MSD Result	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike	Conc.	Spike	Conc.								
1,1,1,2-Tetrachloroethane	ug/kg	ND	60.9	60.9	57.0	46.5	94	76	20-133	20	20		
1,1,1-Trichloroethane	ug/kg	ND	60.9	60.9	56.4	55.0	93	90	27-142	3	20		
1,1,2,2-Tetrachloroethane	ug/kg	ND	60.9	60.9	56.8	41.9	93	69	20-159	30	20		
1,1,2-Trichloroethane	ug/kg	ND	60.9	60.9	58.4	42.9	96	70	20-155	31	20		
1,1-Dichloroethane	ug/kg	ND	60.9	60.9	57.5	50.0	94	82	31-141	14	20		
1,1-Dichloroethene	ug/kg	ND	60.9	60.9	58.8	53.5	97	88	23-132	10	20		
1,1-Dichloropropene	ug/kg	ND	60.9	60.9	59.6	55.8	98	92	20-146	7	20		
1,2,3-Trichlorobenzene	ug/kg	ND	60.9	60.9	43.5	34.3	71	56	20-140	24	20		
1,2,3-Trichloropropane	ug/kg	ND	60.9	60.9	53.9	38.0	89	62	20-153	35	20		
1,2,4-Trichlorobenzene	ug/kg	ND	60.9	60.9	41.6	32.5	68	53	20-120	25	20		
1,2,4-Trimethylbenzene	ug/kg	126	60.9	60.9	131	94.9	8	-51	20-156	32	20	M0	
1,2-Dibromoethane (EDB)	ug/kg	ND	60.9	60.9	58.4	42.0	96	69	20-143	33	20		
1,2-Dichlorobenzene	ug/kg	ND	60.9	60.9	54.1	44.5	89	73	20-133	20	20		
1,2-Dichloroethane	ug/kg	ND	60.9	60.9	60.3	46.0	99	76	30-143	27	20		
1,2-Dichloropropane	ug/kg	ND	60.9	60.9	56.6	45.7	93	75	30-140	21	20		
1,3,5-Trimethylbenzene	ug/kg	22.2	60.9	60.9	64.7	54.4	70	53	20-143	17	20		
1,3-Dichlorobenzene	ug/kg	ND	60.9	60.9	56.0	45.1	92	74	20-136	21	20		
1,3-Dichloropropane	ug/kg	ND	60.9	60.9	60.3	45.0	99	74	30-144	29	20		
1,4-Dichlorobenzene	ug/kg	ND	60.9	60.9	52.8	44.3	87	73	30-135	17	20		
2,2-Dichloropropane	ug/kg	ND	60.9	60.9	48.7	51.2	80	84	30-143	5	20		
2-Butanone (MEK)	ug/kg	ND	305	305	278	189	91	62	30-190	38	20		
2-Chlorotoluene	ug/kg	ND	60.9	60.9	57.6	49.1	95	81	30-170	16	20		
2-Hexanone	ug/kg	ND	305	305	269	187	88	62	30-170	36	20		
4-Chlorotoluene	ug/kg	ND	60.9	60.9	53.8	47.4	88	78	30-143	13	20		
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	305	305	279	194	92	64	30-144	36	20		
Acetone	ug/kg	ND	305	305	265	184	87	60	30-180	36	20		
Acrolein	ug/kg	ND	1220	1220	1820	1240	149	101	30-180	38	20		
Acrylonitrile	ug/kg	ND	1220	1220	1300	881	106	72	30-141	38	20		

Date: 12/30/2008 09:45 AM

## REPORT OF LABORATORY ANALYSIS

Page 9 of 12

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## QUALITY CONTROL DATA

Project: Michigan Meadow  
Pace Project No.: 5022032

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:			250363                    250364											
Parameter	Units	Result	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Limits	Max RPD	Max RPD	Qual
			5021837001	Spike Conc.										
					Spike Conc.	Result			% Rec					
Benzene	ug/kg	ND	60.9	60.9	61.0	52.0	100	85	50-135	16	20			
Bromobenzene	ug/kg	ND	60.9	60.9	56.6	45.9	93	75	30-125	21	20			
Bromoform	ug/kg	ND	60.9	60.9	57.6	44.5	95	73	30-159	26	20			
Bromochloromethane	ug/kg	ND	60.9	60.9	56.7	45.3	93	74	30-141	22	20			
Bromodichloromethane	ug/kg	ND	60.9	60.9	58.1	46.1	95	76	30-135	23	20			
Bromomethane	ug/kg	ND	60.9	60.9	44.5	34.9	73	57	30-137	24	20			
Carbon disulfide	ug/kg	ND	122	122	146	131	120	107	30-156	11	20			
Carbon tetrachloride	ug/kg	ND	60.9	60.9	55.9	56.5	92	93	30-130	1	20			
Chlorobenzene	ug/kg	ND	60.9	60.9	56.9	48.1	93	79	30-137	17	20			
Chloroethane	ug/kg	ND	60.9	60.9	55.6	49.1	91	81	35-143	12	20			
Chloroform	ug/kg	ND	60.9	60.9	56.2	46.4	92	76	30-136	19	20			
Chloromethane	ug/kg	ND	60.9	60.9	53.2	47.3	87	78	28-134	12	20			
cis-1,2-Dichloroethene	ug/kg	21.1	60.9	60.9	76.2	51.0	90	49	30-141	40	20			
cis-1,3-Dichloropropene	ug/kg	ND	60.9	60.9	55.6	44.3	91	73	30-126	23	20			
Dibromochloromethane	ug/kg	ND	60.9	60.9	58.7	46.6	96	76	30-129	23	20			
Dibromomethane	ug/kg	ND	60.9	60.9	58.3	42.8	96	70	30-153	31	20			
Dichlorodifluoromethane	ug/kg	ND	60.9	60.9	64.7	62.0	106	102	30-150	4	20			
Ethyl methacrylate	ug/kg	ND	60.9	60.9	55.6	43.4	91	71	30-170	25	20			
Ethylbenzene	ug/kg	ND	60.9	60.9	54.0	46.3	87	74	50-150	15	20			
Hexachloro-1,3-butadiene	ug/kg	ND	60.9	60.9	41.6	36.8	68	60	30-138	12	20			
Iodomethane	ug/kg	ND	122	122	125	106J	103	87	30-180		20			
Isopropylbenzene (Cumene)	ug/kg	23.4	60.9	60.9	66.6	55.3	71	52	50-150	19	20			
Methyl-tert-butyl ether	ug/kg	ND	122	122	113	86.5	93	71	40-149	27	20			
Methylene chloride	ug/kg	ND	60.9	60.9	57.3	45.3	94	74	30-163	23	20			
n-Butylbenzene	ug/kg	19.2	60.9	60.9	60.2	54.6	67	58	40-152	10	20			
n-Hexane	ug/kg	ND	60.9	60.9	59.8	61.0	98	100	40-155	2	20			
n-Propylbenzene	ug/kg	14.5	60.9	60.9	56.2	50.5	68	59	40-170	11	20			
Naphthalene	ug/kg	ND	60.9	60.9	55.4	41.9	91	69	50-128	28	20			
p-Isopropyltoluene	ug/kg	ND	60.9	60.9	43.1	40.5	71	67	40-167	6	20			
sec-Butylbenzene	ug/kg	15.8	60.9	60.9	53.5	50.5	62	57	40-168	6	20			
Styrene	ug/kg	ND	60.9	60.9	54.9	44.0	90	72	30-141	22	20			
tert-Butylbenzene	ug/kg	ND	60.9	60.9	43.1	40.5	71	67	40-144	6	20			
Tetrachloroethene	ug/kg	ND	60.9	60.9	50.1	45.8	82	75	40-155	9	20			
Toluene	ug/kg	ND	60.9	60.9	56.5	47.8	91	77	50-149	17	20			
trans-1,2-Dichloroethene	ug/kg	ND	60.9	60.9	61.8	55.8	101	92	40-140	10	20			
trans-1,3-Dichloropropene	ug/kg	ND	60.9	60.9	50.6	42.1	83	69	40-130	18	20			
trans-1,4-Dichloro-2-butene	ug/kg	ND	60.9	60.9	53.9J	43.7J	89	72	30-150		20			
Trichloroethene	ug/kg	7.9	60.9	60.9	63.8	54.1	92	76	40-153	17	20			
Trichlorofluoromethane	ug/kg	ND	60.9	60.9	56.7	52.0	93	85	43-140	9	20			
Vinyl acetate	ug/kg	ND	244	244	192	156	79	64	30-120	21	20			
Vinyl chloride	ug/kg	ND	60.9	60.9	58.9	52.9	94	84	36-137	11	20			
Xylene (Total)	ug/kg	ND	183	183	169	142	93	77	50-143	18	20			
4-Bromofluorobenzene (S)	%						102	104	61-131		20			
Dibromofluoromethane (S)	%						102	103	80-124		20	1d		
Toluene-d8 (S)	%						99	99	58-145		20			

Date: 12/30/2008 09:45 AM

## REPORT OF LABORATORY ANALYSIS

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Page 10 of 12

## QUALITY CONTROL DATA

Project: Michigan Meadow  
 Pace Project No.: 5022032

QC Batch:	PMST/3251	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	5022032001		

SAMPLE DUPLICATE: 250492

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.1	15.0	13	5	R2

SAMPLE DUPLICATE: 250493

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.5	6.4	1	5	

## QUALIFIERS

Project: Michigan Meadow  
Pace Project No.: 5022032

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

### ANALYTE QUALIFIERS

1d Several RPD values are outside of acceptance limits, refer to batch QC for system control. aa 12/26/08

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

M0 Matrix spike recovery was outside laboratory control limits.

R2 RPD value was outside control limits due to matrix interference

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



[www.pacelabs.com](http://www.pacelabs.com)

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**\*Important Note:** By signing this form, you are accepting Price's NET 30-day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

**Sample Condition Upon Receipt**

*Pace Analytical*

Client Name: Mundell

5022032

Project # 5021983

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace Other  
Tracking #:

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used 123456 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 6.0°C

Biological Tissue is Frozen: Yes No

Comments:

Date and Initials of person examining contents: 12/19/08

Temp should be above freezing to 6°C	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	5.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sufficient Volume:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9.
Correct Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
-Includes date/time/ID/Analysis Matrix:	<u>S61</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

**Client Notification/ Resolution:**

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Manager Review: BB

Date: 12/19/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 1 of 7  
Lab Proj #: P0812062  
Report Date: 12/11/08  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

## Laboratory Results

Total pages in data package: 8

<u>Lab Sample #</u>	<u>Client Sample ID</u>
P0812062-01	B-1
P0812062-02	B-3
P0812062-03	B-4
P0812062-04	B-5
P0812062-05	B-6
P0812062-06	B-7

Microseeps test results meet all the requirements of the NELAC standards or provide reasons and/or justification if they do not.

Approved By: Debbie Hallo Date: 12-11-08

Project Manager: Debbie Hallo

The analytical results reported here are reliable and usable to the precision expressed in this report. As required by some regulating authorities, a full discussion of the uncertainty in our analytical results can be obtained at our web site or through customer service. Unless otherwise specified, all results are reported on a wet weight basis.

*As a valued client we would appreciate your comments on our service.  
Please call customer service at (412)826-5245 or email [customerservice@microseeps.com](mailto:customerservice@microseeps.com).*

### Case Narrative:

Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 2 of 7  
Lab Proj #: P0812062  
Report Date: 12/11/08  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>	<u>Received</u>	
B-1	Vapor	P0812062-01		26 Nov. 08 11:18	04 Dec. 08 15:21	
<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<b>Risk Analysis</b>						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N Chloroform	0.0160	0.0050	PPMV	AM4.02	12/10/08	mm
N cis-1,2-Dichloroethene	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	12/10/08	mm
N Tetrachloroethene	0.4600	0.0100	PPMV	AM4.02	12/10/08	mm
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Trichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	12/10/08	mm



Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 3 of 7  
Lab Proj #: P0812062  
Report Date: 12/11/08  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>	<u>Received</u>	
B-3	Vapor	P0812062-02		26 Nov. 08 11:35	04 Dec. 08 15:21	
<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<b>RiskAnalysis</b>						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N Chloroform	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N cis-1,2-Dichloroethene	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	12/10/08	mm
N Tetrachloroethene	0.3600	0.0100	PPMV	AM4.02	12/10/08	mm
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Trichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	12/10/08	mm



N - NELAC certified analysis

Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 4 of 7  
Lab Proj #: P0812062  
Report Date: 12/11/08  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>	<u>Received</u>	
B-4	Vapor	P0812062-03		26 Nov. 08 11:47	04 Dec. 08 15:21	
<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<b>Risk Analysis</b>						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N Chloroform	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N cis-1,2-Dichloroethene	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	12/10/08	mm
N Tetrachloroethene	0.1100	0.0100	PPMV	AM4.02	12/10/08	mm
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Trichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	12/10/08	mm



Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 5 of 7  
Lab Proj #: P0812062  
Report Date: 12/11/08  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>	<u>Received</u>	
B-5	Vapor	P0812062-04		26 Nov. 08 12:30	04 Dec. 08 15:21	
<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<b>Risk Analysis</b>						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N Chloroform	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N cis-1,2-Dichloroethene	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	12/10/08	mm
N Tetrachloroethene	0.0720	0.0100	PPMV	AM4.02	12/10/08	mm
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Trichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	12/10/08	mm



N - NELAC certified analysis

Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 6 of 7  
Lab Proj #: P0812062  
Report Date: 12/11/08  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>	<u>Received</u>	
B-6	Vapor	P0812062-05		26 Nov. 08 12:45	04 Dec. 08 15:21	
<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<b>Risk Analysis</b>						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N Chloroform	<0.0050	0.0050	PPMV	AM4.02	12/10/08	mm
N cis-1,2-Dichloroethene	<0.0200	0.0200	PPMV	AM4.02	12/10/08	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	12/10/08	mm
N Tetrachloroethene	0.1100	0.0100	PPMV	AM4.02	12/10/08	mm
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Trichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	12/10/08	mm



Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 7 of 7  
Lab Proj #: P0812062  
Report Date: 12/11/08  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>	<u>Received</u>
B-7	Vapor	P0812062-06		26 Nov. 08 12:56	04 Dec. 08 15:21
<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>
<b>Risk Analysis</b>					
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	12/10/08
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	12/10/08
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	12/10/08
N Chloroform	<0.0050	0.0050	PPMV	AM4.02	12/10/08
N cis-1,2-Dichloroethene	<0.0200	0.0200	PPMV	AM4.02	12/10/08
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	12/10/08
N Tetrachloroethene	0.0560	0.0100	PPMV	AM4.02	12/10/08
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08
N Trichloroethene	<0.0100	0.0100	PPMV	AM4.02	12/10/08
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	12/10/08



N - NELAC certified analysis



## **APPENDIX B**

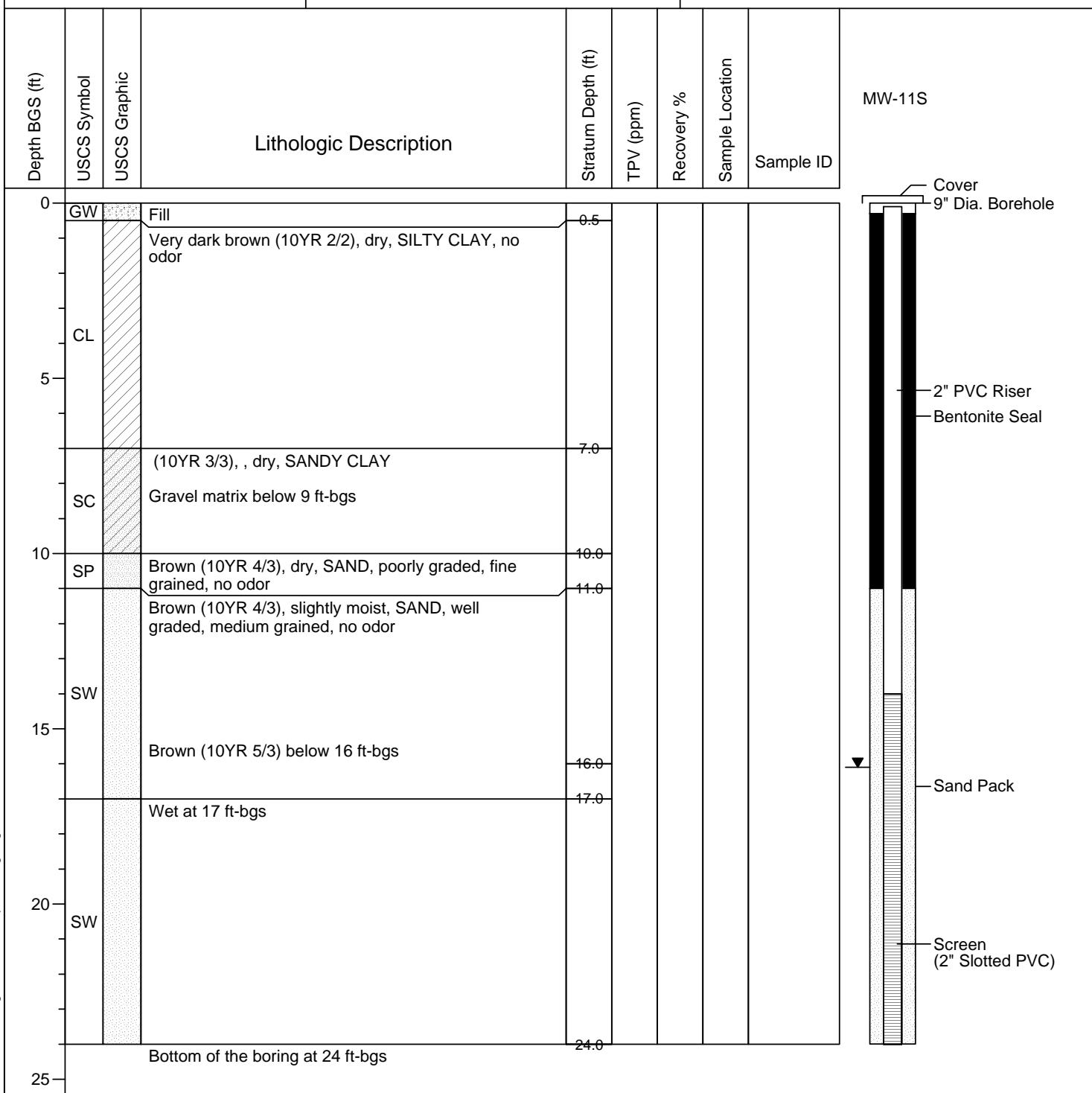
## **SOIL BORING LOGS**



# Boring/Well ID: MW-11S

CLIENT: AIMCO	FIELD GEOLOGIST: LL/GH
PROJECT LOCATION: Indianapolis, IN	DATE BEGAN: 11/26/08
PROJECT NAME: Michigan Meadows	DATE FINISHED: 11/26/08
PROJECT NUMBER: M01046	DRILLING METHOD: Geoprobe/Direct Push
DRILLING CONTRACTOR: Midway	DRILLING EQUIPMENT:
DRILLER: Marty Hicks	GW DEPTH (OBSERVED):
BORING LOCATION:	SURFACE ELEVATION:

SHEET 1 OF 1



TPV = Total Photo-Ionization Vapors

TFV = Total Flame-Ionization Vapors

PPM = Parts Per Million

BGS = Below Ground Surface

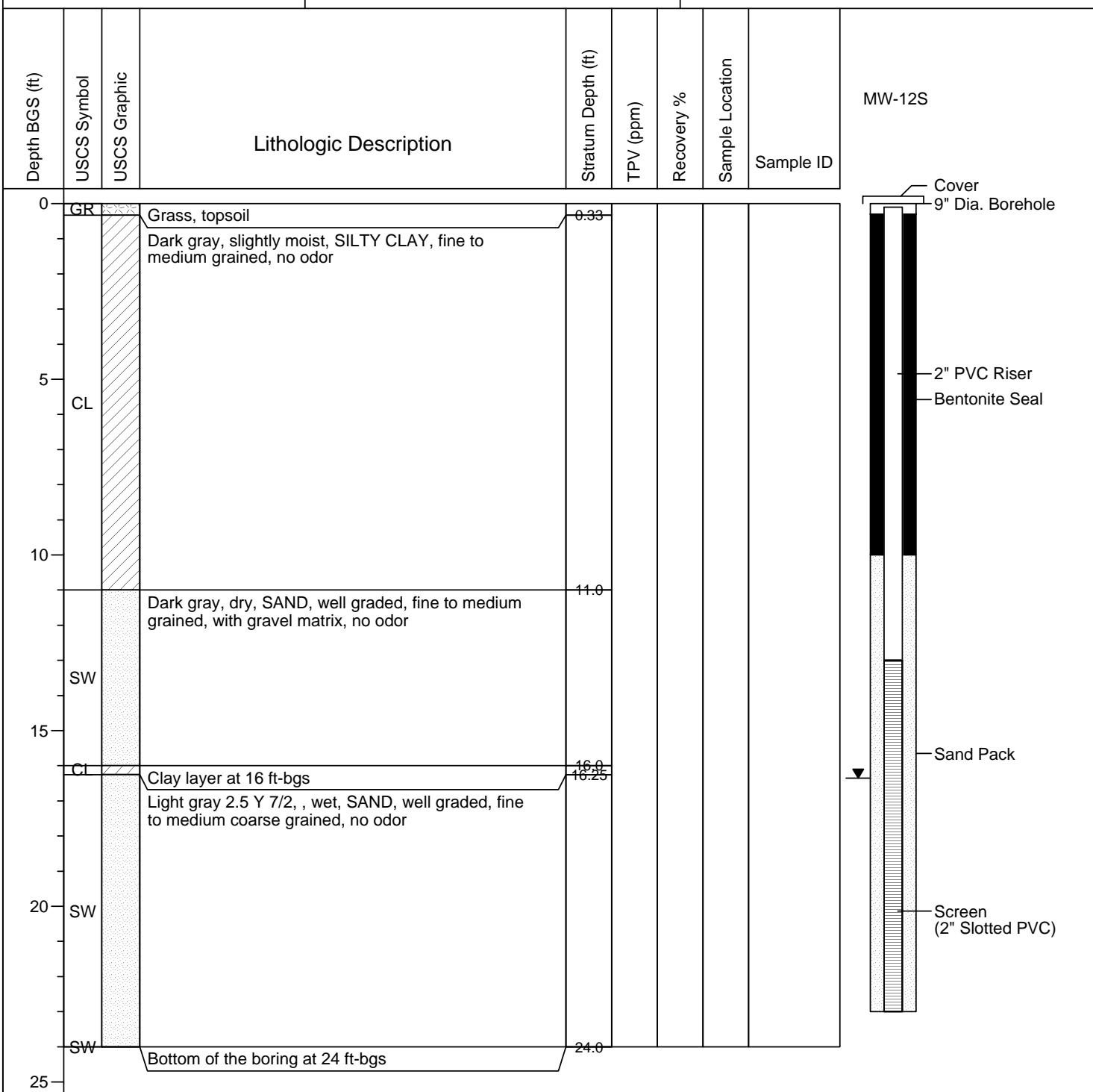
USCS = United Soil Classification System



# Boring/Well ID: MW-12S

CLIENT: AIMCO	FIELD GEOLOGIST: LL/GH
PROJECT LOCATION: Indianapolis, IN	DATE BEGAN: 11/26/08
PROJECT NAME: Michigan Meadows	DATE FINISHED: 11/26/08
PROJECT NUMBER: M01046	DRILLING METHOD: Geoprobe/Direct Push
DRILLING CONTRACTOR: Midway	DRILLING EQUIPMENT:
DRILLER: Marty Hicks	GW DEPTH (OBSERVED):
BORING LOCATION:	SURFACE ELEVATION:

SHEET 1 OF 1



TPV = Total Photo-Ionization Vapors

TFV = Total Flame-Ionization Vapors

PPM = Parts Per Million

BGS = Below Ground Surface

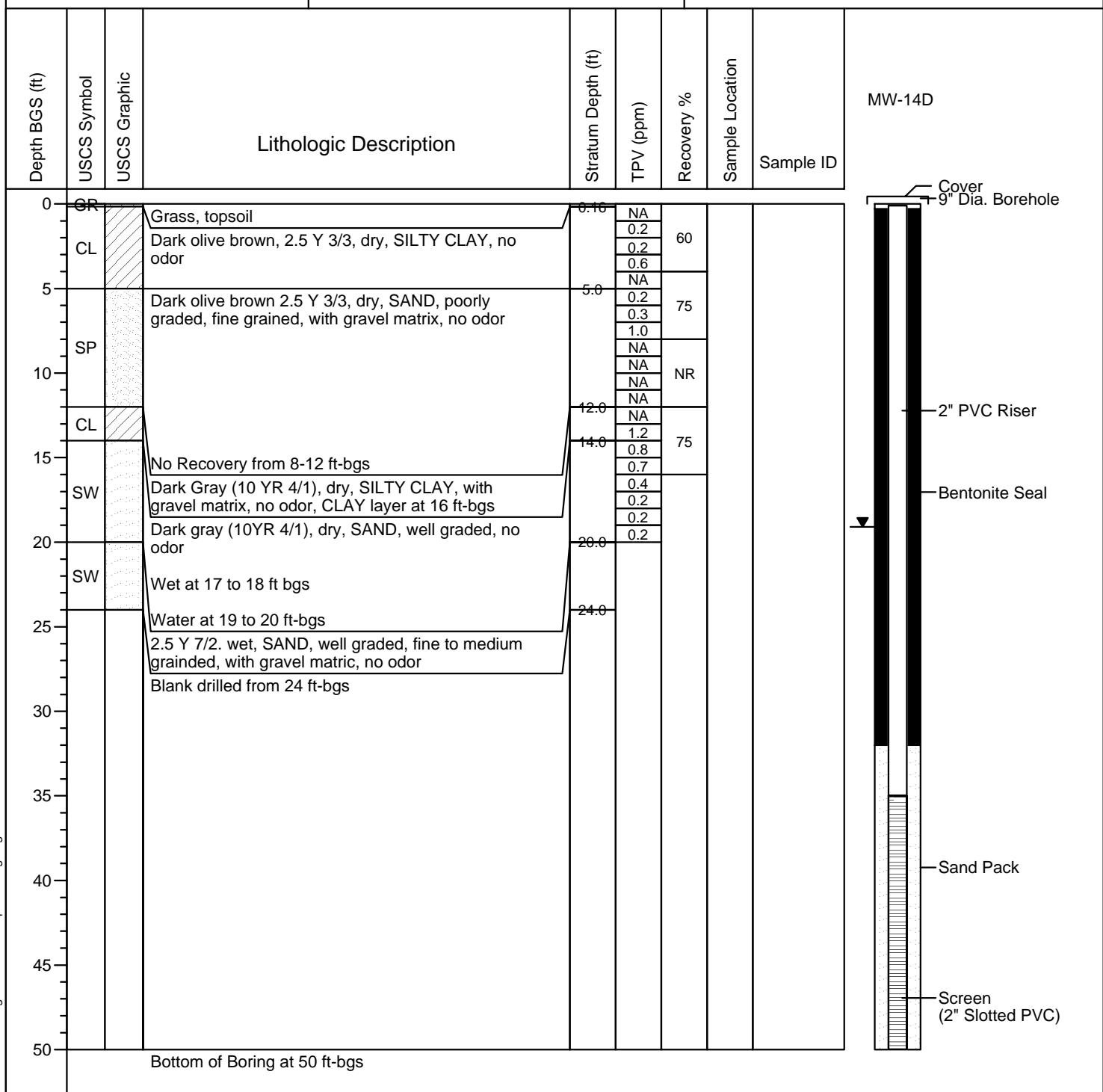
USCS = United Soil Classification System



# Boring/Well ID: MW-13D

CLIENT: AIMCO	FIELD GEOLOGIST: LL
PROJECT LOCATION: Indianapolis, IN	DATE BEGAN: 11/21/08
PROJECT NAME: Michigan Meadows	DATE FINISHED: 11/26/08
PROJECT NUMBER: M01046	DRILLING METHOD: Geoprobe/Direct Push
DRILLING CONTRACTOR: Midway	DRILLING EQUIPMENT:
DRILLER: JR	GW DEPTH (OBSERVED):
BORING LOCATION:	SURFACE ELEVATION:

SHEET 1 OF 1



TPV = Total Photo-Ionization Vapors

TFV = Total Flame-Ionization Vapors

PPM = Parts Per Million

BGS = Below Ground Surface

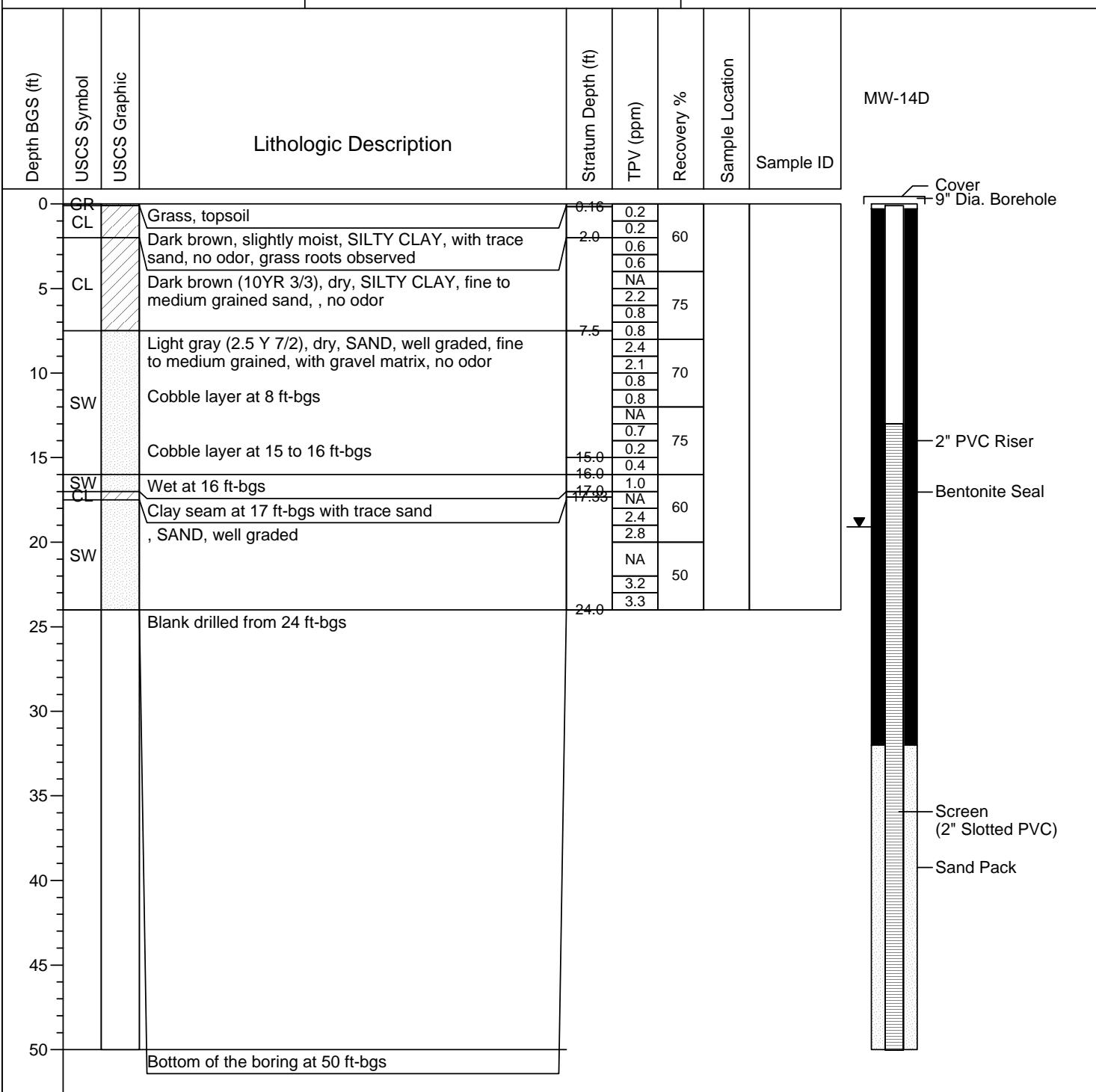
USCS = United Soil Classification System



# Boring/Well ID: MW-14D

CLIENT: AIMCO	FIELD GEOLOGIST: LL
PROJECT LOCATION: Indianapolis, IN	DATE BEGAN: 12/10/08
PROJECT NAME: Michigan Meadows	DATE FINISHED: 11/26/08
PROJECT NUMBER: M01046	DRILLING METHOD: Geoprobe/Direct Push
DRILLING CONTRACTOR: Midway	DRILLING EQUIPMENT: 5410 & HSA
DRILLER: Midway	GW DEPTH (OBSERVED):
BORING LOCATION: West of Bldg 2	SURFACE ELEVATION:

SHEET 1 OF 1



TPV = Total Photo-Ionization Vapors

TFV = Total Flame-Ionization Vapors

PPM = Parts Per Million

BGS = Below Ground Surface

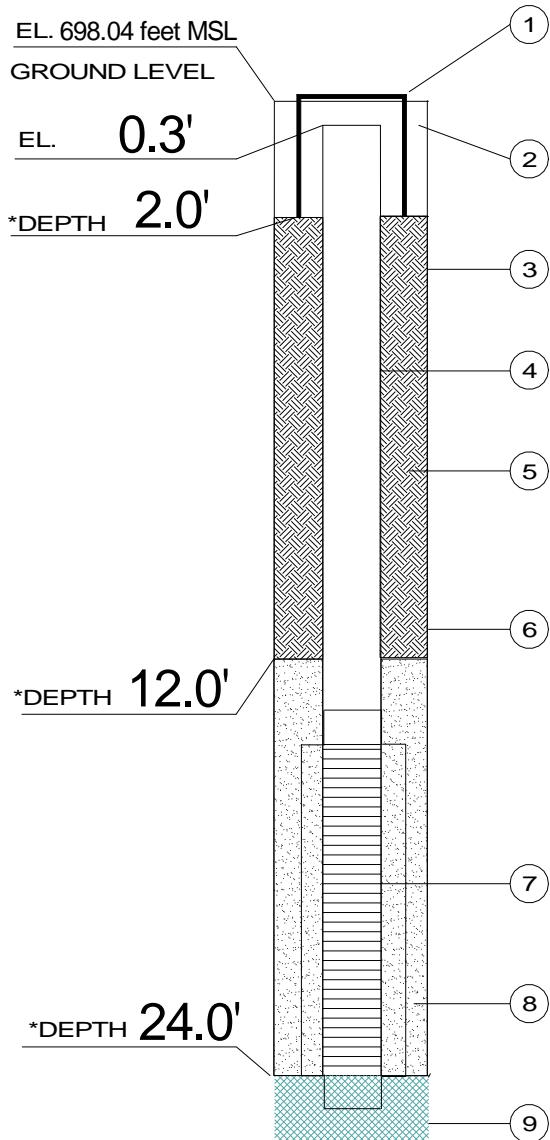
USCS = United Soil Classification System

## **APPENDIX C**

# **MONITORING WELL CONSTRUCTION DIAGRAMS**

# WELL CONSTRUCTION DIAGRAM

**WELL NO.** MMW-11S



GEOLOGIST/FIELD SCIENTIST  
Leena Lothe

8 inches diameter,  
12 inches deep  
Concrete

3. BOREHOLE DIAMETER 8.25 INCHES

4. RISER PIPE:

a. Type PVC

b. I.D. 2.0 INCHES

c. Length 14 FEET

d. Joint Type Threaded

5. BACKFILL:

a. Type Bentonite chips

b. Installation HSA

6. TYPE OF SEAL

Bentonite chips

7. SCREEN:

a. Type PVC (UPACK)

b. I.D. 2.0 inner, 3.5 outer INCHES

c. Slot Size 0.01 INCHES

d. Length 9.5 screen, 10 total FEET

8. SCREEN FILTER TYPE #5 Sand

9. BACKFILL TYPE

DATE COMPLETED 11/26/08

DEVELOPMENT METHOD Geosquirt, Double Barrel Purge Pump

DRILLING CONTRACTOR Midway Services, Inc

DRILLER JR Todish

RIG TYPE Hollow Stem Auger  
BK 51 Heavy Duty

## WELL CONSTRUCTION DIAGRAM

**Michigan Meadows Apartments**  
**3800 West Michigan Street**  
**Indianapolis, Indiana**

Project Number: M01046

Drawing File: MMW-9S.skf

Date Prepared: 6/17/09

Scale:  
Not to Scale

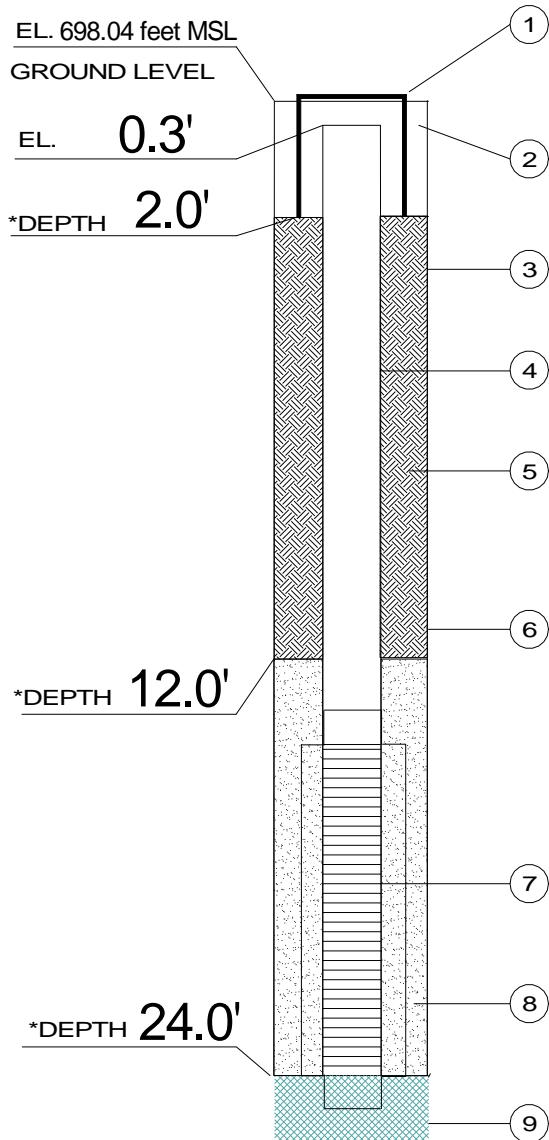
Drn. By: AN Ckd. By: LL Approved By: JM

MUNDELL & ASSOCIATES INC.

110 S Downey Avenue  
Indianapolis, Indiana

# WELL CONSTRUCTION DIAGRAM

**WELL NO.** MMW-12S



\*DEPTH IN FEET BELOW GROUND LEVEL

GEOLOGIST/FIELD SCIENTIST  
Leena Lothe

8 inches diameter,  
12 inches deep  
Concrete

2. SURFACE SEAL TYPE \_\_\_\_\_  
3. BOREHOLE DIAMETER 8.25 INCHES

4. RISER PIPE:  
a. Type PVC  
b. I.D. 2.0 INCHES  
c. Length 18 FEET  
d. Joint Type Threaded

5. BACKFILL:  
a. Type Bentonite chips  
b. Installation HSA

6. TYPE OF SEAL Bentonite chips

7. SCREEN:  
a. Type PVC (UPACK)  
b. I.D. 2.0 inner, 3.5 outer INCHES  
c. Slot Size 0.01 INCHES  
d. Length 9.5 screen, 10 total FEET

8. SCREEN FILTER TYPE #5 Sand

9. BACKFILL TYPE \_\_\_\_\_

DATE COMPLETED 11/26/08

DEVELOPMENT METHOD Geosquirt, Double Barrel Purge Pump

DRILLING CONTRACTOR Midway Services, Inc

DRILLER JR Todish

RIG TYPE Hollow Stem Auger  
BK 51 Heavy Duty

## **WELL CONSTRUCTION DIAGRAM**

**Michigan Meadows Apartments**  
**3800 West Michigan Street**  
**Indianapolis, Indiana**

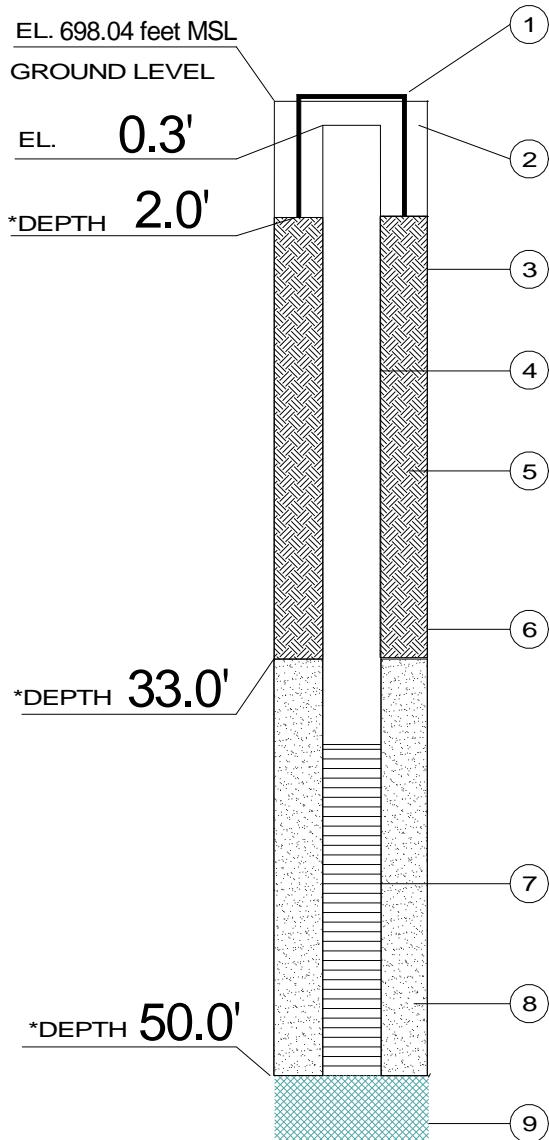
Project Number:	<u>M01046</u>	
Drawing File:	<u>MMW-9S.skf</u>	
Date Prepared:	<u>6/17/09</u>	
Scale:	Not to Scale	
Drn. By: <u>AN</u>	Ckd. By: <u>LL</u>	Approved By: <u>JM</u>

MUNDELL & ASSOCIATES INC.

110 S Downey Avenue  
Indianapolis, Indiana

# WELL CONSTRUCTION DIAGRAM

**WELL NO.** MMW-13D



\*DEPTH IN FEET BELOW GROUND LEVEL

GEOLOGIST/FIELD SCIENTIST  
Leena Lothe

DATE COMPLETED 11/21/08

DEVELOPMENT METHOD Geosquirt, Double Barrel  
Purge Pump

DRILLING CONTRACTOR Midway Services, Inc

DRILLER	<u>JR</u>
RIG TYPE	<u>Hollow Stem Auger BK 51 Heavy Duty</u>

## **WELL CONSTRUCTION DIAGRAM**

**Michigan Meadows Apartments**  
**3800 West Michigan Street**  
**Indianapolis, Indiana**

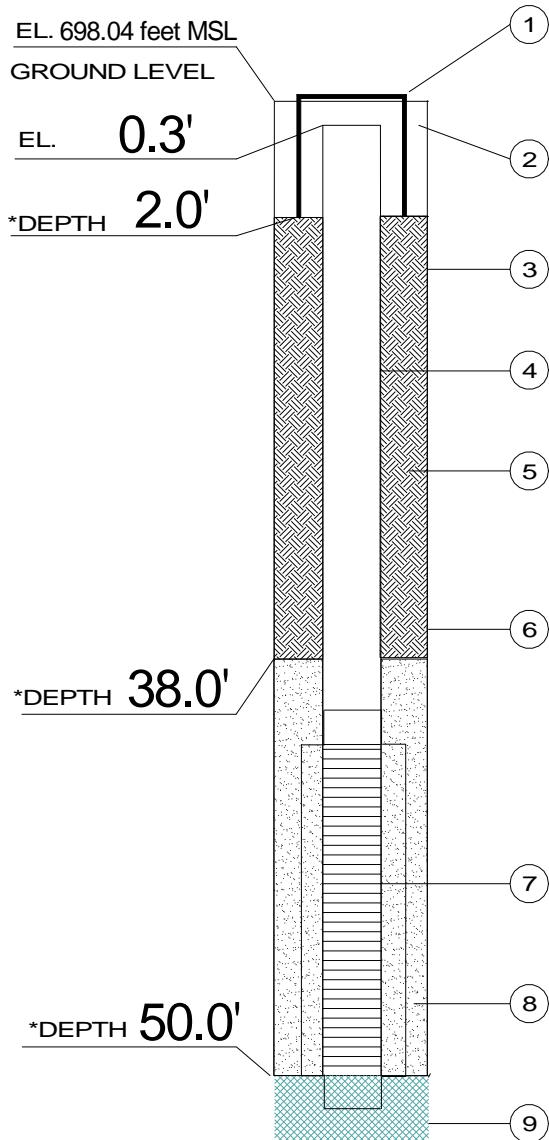
Project Number:	<u>M01046</u>				
Drawing File:	<u>MMW-9S.skf</u>				
Date Prepared:	<u>6/17/09</u>				
Scale:	<u>Not to Scale</u>				
Drn. By:	<u>AN</u>	Ckd. By:	<u>LL</u>	Approved By:	<u>JM</u>

MUNDELL &  
ASSOCIATES INC.

110 S Downey Avenue  
Indianapolis, Indiana

# WELL CONSTRUCTION DIAGRAM

**WELL NO.** MMW-14D



GEOLOGIST/FIELD SCIENTIST  
Leena Lothe

8 inches diameter,  
12 inches deep  
Concrete

2. SURFACE SEAL TYPE \_\_\_\_\_  
3. BOREHOLE DIAMETER 8.25 INCHES

4. RISER PIPE:  
a. Type PVC  
b. I.D. 2.0 INCHES  
c. Length 40 FEET  
d. Joint Type Threaded

5. BACKFILL:  
a. Type Bentonite chips  
b. Installation HSA

6. TYPE OF SEAL Bentonite chips

7. SCREEN:  
a. Type PVC (UPACK)  
b. I.D. 2.0 inner, 3.5 outer INCHES  
c. Slot Size 0.01 INCHES  
d. Length 9.5 screen, 10 total FEET

8. SCREEN FILTER TYPE #5 Sand

9. BACKFILL TYPE \_\_\_\_\_

DATE COMPLETED 12/10/08

DEVELOPMENT METHOD Geosquirt, Double Barrel Purge Pump

DRILLING CONTRACTOR Midway Services, Inc

DRILLER Marty Hicks

RIG TYPE Hollow Stem Auger  
BK 51 Heavy Duty

## **WELL CONSTRUCTION DIAGRAM**

**Michigan Meadows Apartments**  
**3800 West Michigan Street**  
**Indianapolis, Indiana**

Project Number:	<u>M01046</u>	
Drawing File:	<u>MMW-9S.skf</u>	
Date Prepared:	<u>6/17/09</u>	
Scale:	Not to Scale	
Drn. By: <u>AN</u>	Ckd. By: <u>LL</u>	Approved By: <u>JM</u>

MUNDELL & ASSOCIATES INC.

110 S Downey Avenue  
Indianapolis, Indiana

## **APPENDIX D**

### **AIR MITIGATION SYSTEMS CONCENTRATION DATA AND REMOVAL CONCENTRATION**

**Table D1**  
**Air Mitigation System - Historical Air Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Project No.: M01046**

Sample Date	Perchloroethylene (PCE)											
	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4
	(ppmv)				(ppm)				(\mu g/m³)			
9/21/2006	0.6300	0.7900	0.6700	0.2800	0.0043	0.0054	0.0046	0.0019	4281.48	5368.84	4553.32	1902.88
10/6/2006	0.8800	0.6700	0.9700	0.3100	0.0060	0.0046	0.0066	0.0021	5980.48	4553.32	6592.12	2106.76
10/13/2006	0.6800	0.3600	0.5200	0.2100	0.0046	0.0024	0.0035	0.0014	4621.28	2446.56	3533.92	1427.16
10/20/2006	0.8700	0.5500	0.8900	0.2200	0.0059	0.0037	0.0060	0.0015	5912.52	3737.80	6048.44	1495.12
11/17/2006	0.8100	0.4700	0.7800	0.1500	0.0055	0.0032	0.0053	0.0010	5504.76	3194.12	5300.88	1019.40
12/27/2006	0.7400	0.4700	0.7500	0.1100	0.0050	0.0032	0.0051	0.0007	5029.04	3194.12	5097.00	747.56
3/30/2007	0.5100	0.1800	0.5700	0.0310	0.0035	0.0012	0.0039	0.0002	3465.96	1223.28	3873.72	210.68
6/15/2007	<0.100	0.3100	0.2100	0.4600	BDL	0.0021	0.0014	0.0031	BDL	2106.76	1427.16	3126.16
10/16/2007	0.3900	0.2400	0.2800	0.0670	0.0027	0.0016	0.0019	0.0005	2650.44	1631.04	1902.88	455.33
12/14/2007	0.5800	0.3400	0.5200	0.1400	0.0039	0.0023	0.0035	0.0010	3941.68	2310.64	3533.92	951.44
3/27/2008	0.5500	NS	0.5600	0.0740	0.0037	NS	0.0038	0.0005	3737.80	NS	3805.76	502.90
4/1/2008	NS	0.3600	NS	NS	NS	0.0024	NS	NS	NS	2446.56	NS	NS
6/2/2008	0.7200	0.56	0.49	0.1	0.0049	0.0038	0.0033	0.0007	4893.12	3805.76	3330.04	679.60
9/12/2008	0.4800	0.47	0.53	0.13	0.0033	0.0032	0.0036	0.0009	3262.08	3194.12	3601.88	883.48
11/26/2008	0.4600	NS	0.36	0.11	0.0031	NS	0.0024	0.0007	3126.16	NS	2446.56	747.56

Table D1

## Air Mitigation - Historical Air Analytical Results

Michigan Plaza

Indianapolis, Indiana

MUNDELL Project No.: M01046

Sample Date	Trichloroethylene (TCE)											
	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4
	(ppmv)				(ppm)				(\mu g/m³)			
9/21/2006	0.0240	0.0120	<0.0100	<0.0100	0.0001	0.0001	BDL	BDL	129.24	64.62	BDL	BDL
10/6/2006	0.0120	<0.0100	<0.0100	<0.0100	0.0001	BDL	BDL	BDL	64.62	BDL	BDL	BDL
10/13/2006	<0 .0100	< 0.0100	< 0.0100	<0.0100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10/20/2006	<0.0100	<0.0100	<0.0100	<0.0100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11/17/2006	<0.0100	<0.0100	<0.0100	<0.0100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/27/2006	< 0.0100	< 0.0100	< 0.0100	< 0.0100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3/30/2007	< 0.0100	< 0.0100	< 0.0100	< 0.0100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6/15/2007	0.4600	<0.0100	<0.0100	<0.0100	0.0025	BDL	BDL	BDL	2,477.10	BDL	BDL	BDL
10/16/2007	<0.0100	<0.0100	<0.0100	<0.0100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/14/2007	<0.0100	<0.0100	<0.0100	<0.0100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3/27/2008	<0.0100	NS	<0.0100	<0.0100	BDL	NS	BDL	BDL	BDL	BDL	BDL	BDL
4/1/2008	NS	<0.0100	NS	NS	NS	BDL	NS	NS	BDL	BDL	BDL	BDL
6/2/2008	<0.0100	<0.0100	<0.0100	<0.0100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9/12/2008	<0.0100	<0.0100	<0.0100	<0.0100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11/26/2008	<0.0100	NS	<0.0100	<0.0100	BDL	NS	BDL	BDL	BDL	NS	BDL	BDL

Table D1

## Air Mitigation - Historical Air Analytical Results

Michigan Plaza

Indianapolis, Indiana

MUNDELL Project No.: M01046

Sample Date	Vinyl Chloride											
	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4
	(ppmv)				(ppm)				(\mu g/m³)			
9/21/2006	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10/6/2006	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10/13/2006	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10/20/2006	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11/17/2006	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/27/2006	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3/30/2007	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6/15/2007	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10/16/2007	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/14/2007	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3/27/2008	<1.0000	NS	<1.0000	<1.0000	BDL	NS	BDL	BDL	BDL	NS	BDL	BDL
4/1/2008	NS	<1.0000	NS	NS	NS	BDL	NS	NS	NS	BDL	NS	NS
6/2/2008	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9/12/2008	<1.0000	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11/26/2008	<1.0000	NS	<1.0000	<1.0000	BDL	NS	BDL	BDL	BDL	NS	BDL	BDL

Table D1

## Air Mitigation - Historical Air Analytical Results

Michigan Plaza

Indianapolis, Indiana

MUNDELL Project No.: M01046

Sample Date	cis-1,2-Dichloroethylene											
	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4
	(ppmv)				(ppm)				(\mu g/m³)			
9/21/2006	0.1400	<0.0200	<0.0200	<0.0200	0.0006	BDL	BDL	BDL	556.22	BDL	BDL	BDL
10/6/2006	0.0300	<0.0200	<0.0200	<0.0200	0.0001	BDL	BDL	BDL	119.19	BDL	BDL	BDL
10/13/2006	<0.0200	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10/20/2006	<0.0200	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11/17/2006	<0.0200	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/27/2006	0.024	<0.0200	<0.0200	<0.0200	<0.0200	0.0001	BDL	BDL	95.35	BDL	BDL	BDL
3/30/2007	<0.0200	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6/15/2007	0.2100	<0.0200	<0.0200	<0.0200	<0.0200	0.0008	BDL	BDL	834.33	BDL	BDL	BDL
10/16/2007	<0.0200	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/14/2007	<0.0200	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3/27/2008	0.034	NS	<0.0200	<0.0200	<0.0200	0.0001	NS	BDL	135.08	NS	BDL	BDL
4/1/2008	NS	<0.0200	NS	NS	NS	BDL	NS	NS	NS	BDL	NS	NS
6/2/2008	<0.0200	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9/12/2008	<0.0200	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11/26/2008	<0.0200	NS	<0.0200	<0.0200	BDL	NS	BDL	BDL	BDL	NS	BDL	BDL

**Table D2**  
**Air Mitigation System - Historical Air Analytical Results**  
**Michigan Meadows Apartments**  
**Indianapolis, Indiana**  
**MUNDELL Project No.: M01046**

Sample Date	Perchloroethylene (PCE)								
	B-5	B-6	B-7	B-5	B-6	B-7	B-5	B-6	B-7
	(ppmv)			(ppm)			(µg/m³)		
3/27/2008	0.1300	1.2000	NS	0.0009	0.0082	NS	883.48	8155.20	NS
3/28/2008	0.0730	0.4900	NS	0.0005	0.0033	NS	496.11	3330.04	NS
4/7/2008	NS	NS	0.0760	NS	NS	0.0005	NS	NS	516.50
4/8/2008	NS	NS	0.0470	NS	NS	0.0003	NS	NS	319.41
4/24/2008	0.0540	0.1100	0.0220	0.0004	0.0007	0.0001	366.98	747.56	149.51
5/1/2008	0.0580		0.0390	0.0004	0.0000	0.0003	394.17	0.00	265.04
6/2/2008	0.0590	0.2200	0.0530	0.0004	0.0015	0.0004	400.96	1495.12	360.19
7/10/2008	0.0650	NS	0.0540	0.0004	NS	0.0004	441.74	NS	366.98
8/20/2008	NS	0.2700	NS	NS	0.0018	NS	NS	1834.92	NS
9/12/2008	0.0690	0.1800	0.0540	0.0005	0.0012	0.0004	468.92	1223.28	366.98
11/26/2008	0.0720	0.1100	0.0560	0.0005	0.0007	0.0004	489.31	747.56	380.58

**Table D2**  
**Air Mitigation - Historical Air Analytical Results**  
**Michigan Meadows Apartments**  
**Indianapolis, Indiana**  
**MUNDELL Project No.: M01046**

Sample Date	Trichloroethylene (TCE)								
	B-5	B-6	B-7	B-5	B-6	B-7	B-5	B-6	B-7
	(ppmv)			(ppm)			(\mu g/m³)		
3/27/2008	< 0.0100	< 0.0100	NS	BDL	BDL	NS	BDL	BDL	NS
3/27/2008	< 0.0100	< 0.0100	NS	BDL	BDL	NS	BDL	BDL	NS
4/7/2008	NS	NS	< 0.0100	NS	NS	BDL	NS	NS	BDL
4/8/2008	NS	NS	< 0.0100	NS	NS	BDL	NS	NS	BDL
4/24/2008	< 0.0100	< 0.0100	< 0.0100	BDL	BDL	BDL	BDL	BDL	BDL
5/1/2008	< 0.0100	< 0.0100	< 0.0100	BDL	BDL	BDL	BDL	BDL	BDL
6/2/2008	< 0.0100	< 0.0100	< 0.0100	BDL	BDL	BDL	BDL	BDL	BDL
7/10/2008	< 0.0100	NS	< 0.0100	BDL	NS	BDL	BDL	NS	BDL
8/20/2008	NS	< 0.0100	NS	NS	BDL	NS	NS	BDL	NS
9/12/2008	< 0.0100	< 0.0100	< 0.0100	BDL	BDL	BDL	BDL	BDL	BDL
11/26/2008	< 0.0100	< 0.0100	< 0.0100	BDL	BDL	BDL	BDL	BDL	BDL

**Table D2**  
**Air Mitigation - Historical Air Analytical Results**  
**Michigan Meadows Apartments**  
**Indianapolis, Indiana**  
**MUNDELL Project No.: M01046**

Sample Date	Vinyl Chloride								
	B-5	B-6	B-7	B-5	B-6	B-7	B-5	B-6	B-7
	(ppmv)			(ppm)			(\mu g/m³)		
3/27/2008	<1.0000	<1.0000	NS	BDL	BDL	NS	BDL	BDL	NS
3/27/2008	<1.0000	<1.0000	NS	BDL	BDL	NS	BDL	BDL	NS
4/7/2008	NS	NS	<1.0000	NS	NS	BDL	NS	NS	BDL
4/8/2008	NS	NS	<1.0000	NS	NS	BDL	NS	NS	BDL
4/24/2008	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL
5/1/2008	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL
6/2/2008	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL
7/10/2008	<1.0000	NS	<1.0000	BDL	NS	BDL	BDL	NS	BDL
8/20/2008	NS	<1.0000	NS	NS	BDL	NS	NS	BDL	NS
9/12/2008	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL
11/26/2008	<1.0000	<1.0000	<1.0000	BDL	BDL	BDL	BDL	BDL	BDL

**Table D2**  
**Air Mitigation - Historical Air Analytical Results**  
**Michigan Meadows Apartments**  
**Indianapolis, Indiana**  
**MUNDELL Project No.: M01046**

Sample Date	cis-1,2-Dichloroethylene								
	B-5	B-6	B-7	B-5	B-6	B-7	B-5	B-6	B-7
	(ppmv)			(ppm)			( $\mu\text{g}/\text{m}^3$ )		
3/27/2008	<0.0200	<0.0200	NS	BDL	BDL	NS	BDL	BDL	NS
3/28/2008	<0.0200	<0.0200	NS	BDL	BDL	NS	BDL	BDL	NS
4/7/2008	NS	NS	<0.0200	NS	NS	BDL	NS	NS	BDL
4/8/2008	NS	NS	<0.0200	NS	NS	BDL	NS	NS	BDL
4/24/2008	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL
5/1/2008	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL
6/2/2008	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL
7/10/2008	<0.0200	NS	<0.0200	BDL	NS	BDL	BDL	NS	BDL
8/20/2008	NS	<0.0200	NS	NS	BDL	NS	NS	BDL	NS
9/12/2008	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL
11/26/2008	<0.0200	<0.0200	<0.0200	BDL	BDL	BDL	BDL	BDL	BDL

**Table D3**  
**Concentration Averages**  
**Fourth Quarter 2008**  
**11/11/08**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

Sample Date	PCE								TCE								VC								cis-1,2-DCE								
	B-1		B-2		B-3		B-4		B-1		B-2		B-3		B-4		B-1		B-2		B-3		B-4		B-1		B-2		B-3		B-4		
	(µg/m³)								(µg/m³)								(µg/m³)								(µg/m³)								
9/21/2006	4,281.48	4,281.48	5,368.84	5,368.84	4,553.32	4,553.32	1,902.88	1,902.88	129.24	129.24	64.62	64.62	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	556.22	556.22	40	40	40	40	40	40	40		
10/6/2006	5,980.48	5,130.98	4,553.32	4,961.08	6,592.12	5,572.72	2,106.76	2,004.82	64.62	96.93	27.00	45.81	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	119.19	337.71	40	40	40	40	40	40	40		
10/13/2006	4,621.28	5,300.88	2,446.56	3,499.94	3,533.92	5,063.02	1,427.16	1,766.96	27.00	45.81	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	40	79.60	40	40	40	40	40	40	40		
10/20/2006	5,912.52	5,266.90	3,737.80	3,092.18	6,048.44	4,791.18	1,495.12	1,461.14	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	40	40.00	40	40	40	40	40	40	40		
11/17/2006	5,504.76	5,708.64	3,194.12	3,465.96	5,300.88	5,674.66	1,019.40	1,257.26	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	40	40.00	40	40	40	40	40	40	40		
12/27/2006	5,029.04	5,266.90	3,194.12	3,194.12	5,097.00	5,198.94	747.56	883.48	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	95.35	67.68	40	40	40	40	40	40	40		
3/30/2007	3,465.96	4,247.50	1,223.28	2,208.70	3,873.72	4,485.36	210.68	479.12	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	40	67.68	40	40	40	40	40	40	40		
6/15/2007	34.00	1,749.98	2,106.76	1,665.02	1,427.16	2,650.44	3,126.16	1,668.42	2,477.10	1,252.05	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	834.33	437.17	40	40	40	40	40	40	40		
10/16/2007	2,650.44	1,342.22	1,631.04	1,868.90	1,902.88	1,665.02	455.33	1,790.75	27.00	1,252.05	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	40	437.17	40	40	40	40	40	40	40		
12/14/2007	3,941.68	3,296.06	2,310.64	1,970.84	3,533.92	2,718.40	951.44	703.39	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	40	40.00	40	40	40	40	40	40	40		
3/27/2008	3,737.80	3,839.74	NS	NS	3,805.76	3,669.84	502.90	727.17	27.00	27.00	NS	NS	27.00	27.00	27.00	27.00	1,280	1,280	NS	NS	1,280	1,280	1,280	1,280	135.08	87.54	NS	NS	40	40	40	40	
4/1/2008	NS	NS	2,446.56	2,378.60	NS	NS	NS	NS	NS	NS	27.00	27.00	NS	NS	NS	NS	NS	1,280	1,280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
6/2/2008	4,893.12	4,315.46	3,805.76	3,126.16	3,330.04	3,567.90	679.60	591.25	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	40	87.54	40	40	40	40	40	40	40		
9/12/2008	3262.08	4,077.60	3,194.12	3,499.94	3,601.88	3,465.96	883.48	781.54	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	1,280	1,280	1,280	1,280	1,280	1,280	40	40.00	40	40	40	40	40	40	40		
11/26/2008	3126.16	3,194.12	NS	NS	2,446.56	3,024.22	747.56	815.52	27.00	27.00	NS	NS	27.00	27.00	27.00	27.00	1,280	1,280	NS	NS	1,280	1,280	1,280	1,280	40	40.00	NS	NS	40	40	40	40	40

\*\*The detection limit for Vinyl Chloride is fairly high compared to the others. Using 1/2 the detections limit as the assumed concentration will significantly raise the "total pollutants removed" calculation. -DJP \*\*

Sample Date	PCE						TCE						VC						cis-1,2-DCE					
	B-5		B-6		B-7		B-5		B-6		B-7		B-5		B-6		B-7		B-5		B-6		B-7	
	(µg/m³)																							

**Table D4**  
**Total Pounds Removed**  
**Fourth Quarter 2008**  
**11/11/08**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

**TOTAL Lbs. REMOVED**

	<u>PID Data</u>		<u>Lab Data</u>				<b>TOTALS</b>
	PCE	PCE	TCE	VC	cis-1,2-DCE		
B-1	12.0	18.1	1.8	6.7	0.8		27.3
B-2	6.5	6.9	0.1	3.6	0.1		10.7
B-3	22.3	25.2	0.3	12.1	0.4		37.9
B-4	18.6	7.7	0.2	11.8	0.4		20.1
B-5	3.8	1.1	0.1	3.2	0.1		4.5
B-6	4.7	3.4	0.1	3.2	0.1		6.8
B-7	3.8	0.8	0.1	2.8	0.1		3.8
<b>TOTALS:</b>	<b>71.6</b>	<b>63.2</b>	<b>2.5</b>	<b>43.4</b>		<b>2.0</b>	<b>111.2</b>

Table D5														
Lab Data for Air Mitigation System B-1														
Fourth Quarter 2008														
11/26/08														
Michigan Plaza														
3801-3823 West Michigan Street														
Indianapolis, Indiana														
MUNDELL Project No. M01046														
B-1 (Lab Data)														
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m3 PCE	Lbs. PCE removed	µg/m3 TCE	Lbs. TCE removed	µg/m3 VC	Lbs. VC removed	µg/m3 cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed (ug/m3)	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed
9/21/2006	0.5	73	2,190	4,281	0.00	129	0.00	1,280	0.00	556	0.00	0.00	0.00	0.00
10/6/2006	360	73	1,576,800	5,131	0.50	97	0.01	1,280	0.13	338	0.03	0.67	0.51	0.67
10/13/2006	168	73	735,840	5,301	0.24	46	0.00	1,280	0.06	80	0.00	0.31	0.75	0.98200531
10/20/2006	168	73	735,840	5,267	0.24	27	0.00	1,280	0.06	40	0.00	0.30	0.990333	1.28558899
11/17/2006	672	73	2,943,360	5,709	1.05	27	0.00	1,280	0.24	40	0.01	1.30	2.0384589	2.58102866
12/27/2006	960	73	4,204,800	5,267	1.38	27	0.01	1,280	0.34	68	0.02	1.74	3.4199173	4.32305167
3/30/2007	2,232	73	9,776,160	4,248	2.59	27	0.02	1,280	0.78	68	0.04	3.43	6.0101518	7.75159888
6/15/2007	1,848	73	8,094,240	1,750	0.88	1,252	0.63	1,280	0.65	437	0.22	2.38	6.8937331	10.1343649
10/16/2007	2,952	73	12,929,760	1,342	1.08	1,252	1.01	1,280	1.03	437	0.35	3.48	7.9762921	13.6117253
12/14/2007	1,416	73	6,202,080	3,296	1.28	27	0.01	1,280	0.50	40	0.02	1.80	9.2514674	15.408026
3/27/2008	2,496	73	10,932,480	3,840	2.62	27	0.02	1,280	0.87	88	0.06	3.57	11.869999	18.9775732
6/2/2008	1,608	73	7,043,040	4,315	1.90	27	0.01	1,280	0.56	88	0.04	2.51	13.76594	21.4861866
9/12/2008	2,448	73	10,722,240	4,078	2.73	27	0.02	1,280	0.86	40	0.03	3.63	16.493206	25.1143817
11/26/2008	1,800	73	7,884,000	3,194	1.57	27	0.01	1,280	0.63	40	0.02	2.23	18.063999	27.3476223
<b>TOTALS:</b>	<b>14,881</b>		<b>83,782,830</b>		<b>18.06</b>		<b>1.76</b>		<b>6.69</b>		<b>0.84</b>		<b>27.35</b>	
B-1 (PID Readings)														
Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m3 VOCs Removed	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)							
9/21/2006	0.5	73	2,190	4.9	10,439	0.00	0							
9/28/2006	168	73	735,840	1.9	4,841	0.22	0.2237							
10/6/2006	192	73	840,960	1.0	3,162	0.17	0.38952311							
10/13/2006	168	73	735,840	0.6	2,322	0.11	0.496118669							
10/20/2006	168	73	735,840	0.3	1,902	0.09	0.583442753							
11/17/2006	672	73	2,943,360	0.1	1,483	0.27	0.855653192							
12/27/2006	960	73	4,204,800	0.0	1,296	0.34	1.195581819							
6/15/2007	4,080	73	17,870,400	0.1	1,483	1.65	2.848288055							
10/16/2007	2,952	73	12,929,760	0.1	1,483	1.20	4.044069625							
12/14/2007	1,416	73	6,202,080	0.1	1,483	0.57	4.617655906							
3/27/2008	2,496	73	10,932,480	1.7	4,468	3.05	7.664769832							
6/2/2008	1,608	73	7,043,040	2.2	5,401	2.37	10.03771558							
9/12/2008	2,448	73	10,722,240	0.3	1,856	1.24	11.27895081							
11/26/2008	1,800	73	7,884,000	0.1	1,483	0.73	12.00808591							
<b>TOTALS:</b>	<b>14,881</b>		<b>83,782,830</b>		<b>12.01</b>									

Table D6														
Lab Data for Air Mitigation System B-2														
Fourth Quarter 2008														
11/26/08														
Michigan Plaza														
3801-3823 West Michigan Street														
Indianapolis, Indiana														
MUNDELL Project No. M01046														
B-2 (Lab Data)														
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m³ PCE	Lbs. PCE removed	µg/m³ TCE	Lbs. TCE removed	µg/m³ VC	Lbs. VC removed	µg/m³ cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed
9/21/2006	0.5	37	1,110	5,369	0.00	65	0.00	1,280	0.00	40	0.00	0.00	0.000371741	0.000467613
10/6/2006	360	37	799,200	4,961	0.25	46	0.00	1,280	0.06	40	0.00	0.32	0.247697359	0.315883203
10/13/2006	168	37	372,960	3,500	0.08	27	0.00	1,280	0.03	40	0.00	0.11	0.329122824	0.428646378
10/20/2006	168	37	372,960	3,092	0.07	27	0.00	1,280	0.03	40	0.00	0.10	0.401061828	0.531923091
11/17/2006	672	37	1,491,840	3,466	0.32	27	0.00	1,280	0.12	40	0.00	0.45	0.723601537	0.979813638
12/27/2006	960	37	2,131,200	3,194	0.42	27	0.00	1,280	0.17	40	0.01	0.60	1.148233647	1.583518373
3/30/2007	2,232	38	5,088,960	2,209	0.70	27	0.01	1,280	0.41	40	0.01	1.13	1.849371097	2.712252211
6/15/2007	1,848	42	4,656,960	1,665	0.48	27	0.01	1,280	0.37	40	0.01	0.87	2.333052465	3.587231464
10/16/2007	2,952	48	8,501,760	1,869	0.99	27	0.01	1,280	0.68	40	0.02	1.71	3.324186298	5.292719875
12/14/2007	1,416	53	4,502,880	1,971	0.55	27	0.01	1,280	0.36	40	0.01	0.93	3.8777647	6.224649694
4/1/2008	2,616	50	7,848,000	2,379	1.16	27	0.01	1,280	0.63	40	0.02	1.82	5.042206548	8.048514384
6/2/2008	1,488	42	3,705,120	3,126	0.72	27	0.01	1,280	0.30	40	0.01	1.03	5.764728217	9.082356231
9/12/2008	2,448	37	5,434,560	3,450	1.17	27	0.01	1,280	0.43	40	0.01	1.63	6.934283834	10.70854704
11/26/2008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>TOTALS:</b>	<b>14,881</b>		<b>44,907,510</b>		<b>6.93</b>		<b>0.08</b>		<b>3.59</b>		<b>0.11</b>		<b>10.71</b>	

B-2 (PID Readings)														
Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m³ VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)							
9/21/2006	0.5	37	1,110	2.0	5,028	0.00	0.000348141							
9/28/2006	168	37	372,960	2.0	5,028	0.12	0.117323644							
10/6/2006	192	37	426,240	1.1	3,255	0.09	0.203876742							
10/13/2006	168	37	372,960	0.6	2,369	0.06	0.258989932							
10/20/2006	168	37	372,960	0.3	1,926	0.04	0.303792736							
10/27/2006	672	37	1,491,840	0.1	1,483	0.14	0.441762411							
12/27/2006	960	37	2,131,200	0.1	1,483	0.20	0.638861946							
6/15/2007	4,080	41	10,036,800	0.1	1,483	0.93	1.567094215							
10/16/2007	2,952	48	8,501,760	0.1	1,483	0.79	2.353361548							
12/14/2007	1,416	53	4,502,880	0.1	1,483	0.42	2.769800904							
6/2/2008	4,104	46.5	11,450,160	1.5	4,095	2.92	5.694645915							
9/12/2008	2,448	37	5,434,560	0.5	2,229	0.76	6.450280544							
11/26/2008	NS	NS	NS	NS	NS	NS	NS							
<b>TOTALS:</b>	<b>14,881</b>		<b>45,095,430</b>		<b>6.45</b>									

Table D7																						
Lab Data for Air Mitigation System B-3																						
Fourth Quarter 2008																						
11/26/08																						
Michigan Plaza																						
3801-3823 West Michigan Street																						
Indianapolis, Indiana																						
MUNDELL Project No. M01046																						
B-3 (Lab Data)													B-3 (PID Readings)									
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m³ PCE	Lbs. PCE removed	µg/m³ TCE	Lbs. TCE removed	µg/m³ VC	Lbs. VC removed	µg/m³ cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m³ VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
9/21/2006	0.5	132	3,960	4,553	0.00	27	0.00	1,280	0.00	40	0.00	0.00	0.0011248	0.0014575	9/21/2006	0.5	132	3,960	1.8	4,655	0.00	0.0011498
10/6/2006	360	132	2,851,200	5,573	0.99	27	0.00	1,280	0.23	40	0.01	1.23	0.9922586	1.2321615	9/28/2006	168	132	1,330,560	2.2	5,401	0.45	0.449443
10/13/2006	168	132	1,330,560	5,063	0.42	27	0.00	1,280	0.11	40	0.00	0.53	1.4124832	1.7641855	10/6/2006	192	132	1,520,640	2.1	5,215	0.49	0.944078
10/20/2006	168	132	1,330,560	4,791	0.40	27	0.00	1,280	0.11	40	0.00	0.51	1.8101455	2.2736471	10/13/2006	168	132	1,330,560	2.1	5,121	0.43	1.3691398
11/17/2006	672	132	5,322,240	5,675	1.88	27	0.01	1,280	0.42	40	0.01	2.33	3.6941055	4.6048048	10/20/2006	168	132	1,330,560	2.0	5,075	0.42	1.7903297
12/27/2006	960	132	7,603,200	5,199	2.47	27	0.01	1,280	0.61	40	0.02	3.10	6.1598531	7.7094061	11/17/2006	672	132	5,322,240	2.0	5,028	1.67	3.4596017
3/30/2007	2,232	132	17,677,440	4,485	4.95	27	0.03	1,280	1.41	40	0.04	6.43	11.105853	14.14074	12/27/2006	960	132	7,603,200	0.1	1,483	0.70	4.1627676
6/15/2007	1,848	132	14,636,160	2,650	2.42	27	0.02	1,280	1.17	40	0.04	3.65	13.52567	17.790351	6/15/2007	4,080	132	32,313,600	0.1	1,483	2.99	7.1512227
10/16/2007	2,952	132	23,379,840	1,665	2.43	27	0.04	1,280	1.87	40	0.06	4.39	15.953948	22.183104	10/16/2007	2,952	132	23,379,840	0.1	1,483	2.16	9.3134579
12/14/2007	1,416	132	11,214,720	2,718	1.90	27	0.02	1,280	0.90	40	0.03	2.84	17.855635	25.027101	12/14/2007	1,416	132	11,214,720	0.1	1,483	1.04	10.350628
3/27/2008	2,496	132	19,768,320	3,670	4.53	27	0.03	1,280	1.58	40	0.05	6.19	22.381007	31.213492	3/27/2008	2,496	132	19,768,320	1.3	3,722	4.59	14.940073
6/2/2008	1,608	132	12,735,360	3,568	2.83	27	0.02	1,280	1.02	40	0.03	3.90	25.215408	35.117973	6/2/2008	1,608	132	12,735,360	1.2	3,535	2.81	17.748496
9/12/2008	2,448	132	19,388,160	3,466	4.19	27	0.03	1,280	1.55	40	0.05	5.82	29.407228	40.938869	9/12/2008	2,448	132	19,388,160	0.5	2,229	2.70	20.444274
11/26/2008	1,800	132	14,256,000	3,024	2.69	27	0.02	1,280	1.14	40	0.04	3.89	32.096389	44.825881	11/26/2008	1,800	132	14,256,000	0.4	2,042	1.82	22.260525
<b>TOTALS:</b>	<b>14,881</b>		<b>117,853,560</b>		<b>25.22</b>		<b>0.26</b>		<b>12.10</b>		<b>0.38</b>		<b>35.12</b>		<b>TOTALS:</b>	<b>14,881</b>		<b>151,497,720</b>		<b>22.26</b>		

Table D8

## Lab Data for Air Mitigation System B-4

Fourth Quarter 2008

11/26/08

Michigan Plaza

3801-3823 West Michigan Street

Indianapolis, Indiana

MUNDELL Project No. M01046

B-4 (Lab Data)													B-4 (PID Readings)									
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m3 PCE	Lbs. PCE removed	µg/m3 TCE	Lbs. TCE removed	µg/m3 VC	Lbs. VC removed	µg/m3 cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m3 VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
9/21/2006	0.5	132	3,960	1,903	0.00	27	0.00	1,280	0.00	40	0.00	0.00	0.00047	0.0008028	9/21/2006	0.5	132	3,960	0.2	1,669	0.00	0.0004123
10/6/2006	360	132	2,851,200	2,005	0.36	27	0.00	1,280	0.23	40	0.01	0.60	0.3570365	0.5969394	9/28/2006	168	132	1,330,560	0.4	2,042	0.17	0.1699291
10/13/2006	168	132	1,330,560	1,767	0.15	27	0.00	1,280	0.11	40	0.00	0.26	0.5036921	0.8553943	10/6/2006	192	132	1,520,640	0.3	1,763	0.17	0.3371124
10/20/2006	168	132	1,330,560	1,461	0.12	27	0.00	1,280	0.11	40	0.00	0.23	0.6249649	1.0884666	10/13/2006	168	132	1,330,560	0.2	1,623	0.13	0.4717821
11/17/2006	672	132	5,322,240	1,257	0.42	27	0.01	1,280	0.42	40	0.01	0.86	1.0423693	1.9530685	10/20/2006	168	132	1,330,560	0.1	1,553	0.13	0.600644
12/27/2006	960	132	7,603,200	883	0.42	27	0.01	1,280	0.61	40	0.02	1.06	1.4613852	3.0109381	11/17/2006	672	132	5,322,240	0.1	1,483	0.49	1.0928601
3/30/2007	2,232	130	17,342,640	479	0.52	27	0.03	1,280	1.38	40	0.04	1.98	1.9797018	4.9864582	12/27/2006	960	132	7,603,200	0.1	1,483	0.70	1.796026
6/15/2007	1,848	125	13,887,720	1,668	1.45	27	0.02	1,280	1.11	40	0.03	2.61	3.4250524	7.598715	6/15/2007	4,080	127.75	31,273,200	0.1	1,483	2.89	4.688262
10/16/2007	2,952	128	22,627,080	1,791	2.53	27	0.04	1,280	1.81	40	0.06	4.43	5.9526032	12.027491	10/16/2007	2,952	128	22,671,360	0.1	1,483	2.10	6.7849748
12/14/2007	1,416	132	11,214,720	703	0.49	27	0.02	1,280	0.90	40	0.03	1.43	6.4446649	13.461862	12/14/2007	1,416	132	11,214,720	0.1	1,483	1.04	7.8221446
3/27/2008	2,496	128	19,094,400	727	0.87	27	0.03	1,280	1.52	40	0.05	2.47	7.3107899	15.932381	3/29/2008	2,544	128	19,537,920	1.8	4,655	5.67	13.495196
6/2/2008	1,608	119	11,481,120	591	0.42	27	0.02	1,280	0.92	40	0.03	1.39	7.7342322	17.320516	6/2/2008	1,560	119	11,138,400	0.3	1,856	1.29	14.784607
9/12/2008	2,448	132	19,388,160	782	0.95	27	0.03	1,280	1.55	40	0.05	2.57	8.6799918	19.895353	9/12/2008	2,448	132	19,388,160	0.4	2,042	2.47	17.254709
11/26/2008	1,800	132	14,256,000	816	0.73	27	0.02	1,280	1.14	40	0.04	1.92	9.4056385	21.81885	11/26/2008	1,800	132	14,256,000	0.1	1,483	1.32	18.573145
<b>TOTALS:</b>	<b>14,881</b>		<b>114,089,400</b>		<b>7.73</b>		<b>0.25</b>		<b>11.80</b>		<b>0.37</b>		<b>21.82</b>		<b>TOTALS:</b>	<b>14,881</b>		<b>147,921,480</b>		<b>18.57</b>		

**Table D9**

## **Lab Data for Air Mitigation System B-5**

Fourth Quarter 2008

11/26/08

Michigan Plaza

**3801-3823 West Michigan Street**

Indianapolis, Indiana

MUNDELL Project No. M01046

Table D10

## Lab Data for Air Mitigation System B-6

Fourth Quarter 2008

11/26/08

Michigan Plaza

3801-3823 West Michigan Street

Indianapolis, Indiana

MUNDELL Project No. M01046

B-6 (Lab Data)													B-6 (PID Readings)									
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m3 PCE	Lbs. PCE removed	µg/m3 TCE	Lbs. TCE removed	µg/m3 VC	Lbs. VC removed	µg/m3 cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m3 VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
3/27/2008	0.5	130	3,900	8,155	0.00	27	0.00	1,280	0.00	40	0.00	0.00	0.001983977	0.002311672	3/29/2008	50	110	330,000	1.7	4,468	0.09	0.091978
3/28/2008	24	119	171,144	5,743	0.06	27	0.00	1,280	0.01	40	0.00	0.08	0.063290848	0.077998801	3/31/2008	48	111	319,680	0.1	1,483	0.03	0.121543
4/24/2008	648	114	4,426,488	2,039	0.56	27	0.01	1,280	0.35	40	0.01	0.93	0.626242778	1.012883362	5/1/2008	744	118	5,267,520	0.3	1,856	0.61	0.731325
5/1/2008	168	123	1,234,800	1,087	0.08	27	0.00	1,280	0.10	40	0.00	0.19	0.709997128	1.200390939	6/2/2008	768	120	5,529,600	1.1	3,349	1.16	1.886358
6/2/2008	768	120	5,506,560	1,461	0.50	27	0.01	1,280	0.44	40	0.01	0.96	1.211888352	2.164967107	9/12/2008	2,448	114	16,744,320	0.1	1,483	1.55	3.434921
9/12/2008	2,448	114	16,744,320	1,359	1.42	27	0.03	1,280	1.34	40	0.04	2.83	2.631352305	4.991361114	11/26/2008	1,800	114	12,312,000	0.2	1,669	1.28	4.716881
11/26/2008	1,800	112	12,096,000	985	0.74	27	0.02	1,280	0.97	40	0.03	1.76	3.374568911	6.750935861	TOTALS:	36,629		308,422,560			4.72	
<b>TOTALS:</b>	<b>1,609</b>		<b>40,183,212</b>		<b>3.37</b>		<b>0.07</b>		<b>3.21</b>		<b>0.10</b>		<b>6.75</b>									

**Table D11**

## **Lab Data for Air Mitigation System B-7**

Fourth Quarter 2008

11/26/08

**Michigan Plaza**

## **Indianapolis, Indiana**

**MUNDELL Project No. M01046**

B-7 (Lab Data)														B-7 (PID Readings)									
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m3 PCE	Lbs. PCE removed	µg/m3 TCE	Lbs. TCE removed	µg/m3 VC	Lbs. VC removed	µg/m3 cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m3 VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)	
4/7/2008	0.5		0	516	0.00	27	0.00	1,280	0.00	40	0.00	0.00	0	0	5/1/2008	576	120	4,147,200	0.1	1,483	0.38	0.383545041	
4/8/2008	24		0	418	0.00	27	0.00	1,280	0.00	40	0.00	0.00	0	0	6/2/2008	768	117	5,391,360	0.3	1,856	0.62	1.007663315	
4/24/2008	384		0	234	0.00	27	0.00	1,280	0.00	40	0.00	0.00	0	0	9/12/2008	2,448	114	16,744,320	0.1	1,483	1.55	2.556226417	
5/1/2008	168	120	1,209,600	207	0.02	27	0.00	1,280	0.10	40	0.00	0.12	0.015639843	0.1172757	11/26/2008	1,800	112	12,096,000	0.2	1,669	1.26	3.815695614	
6/2/2008	768	117	5,391,360	313	0.11	27	0.01	1,280	0.43	40	0.01	0.56	0.120774749	0.6754159									
7/10/2008	912	118	6,456,960	367	0.15	27	0.01	1,280	0.52	40	0.02	0.69	0.268586134	1.3657689									
9/12/2008	1,536	114	10,506,240	364	0.24	27	0.02	1,280	0.84	40	0.03	1.12	0.507139802	2.4871023									
11/26/2008	1,800	112	12,096,000	374	0.28	27	0.02	1,280	0.97	40	0.03	1.30	0.789335752	3.7856563									
<b>TOTALS:</b>	<b>2,257</b>		<b>35,660,160</b>		<b>0.79</b>		<b>0.06</b>		<b>2.85</b>		<b>0.09</b>		<b>3.79</b>			<b>TOTALS:</b>	<b>43,831</b>		<b>358,464,240</b>		<b>3.82</b>		